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THE INTERNATIONAL MONTHLY FOR GAMES PROGRAMMERS, ARTISTS, MUSICIANS AND PRODUCERS

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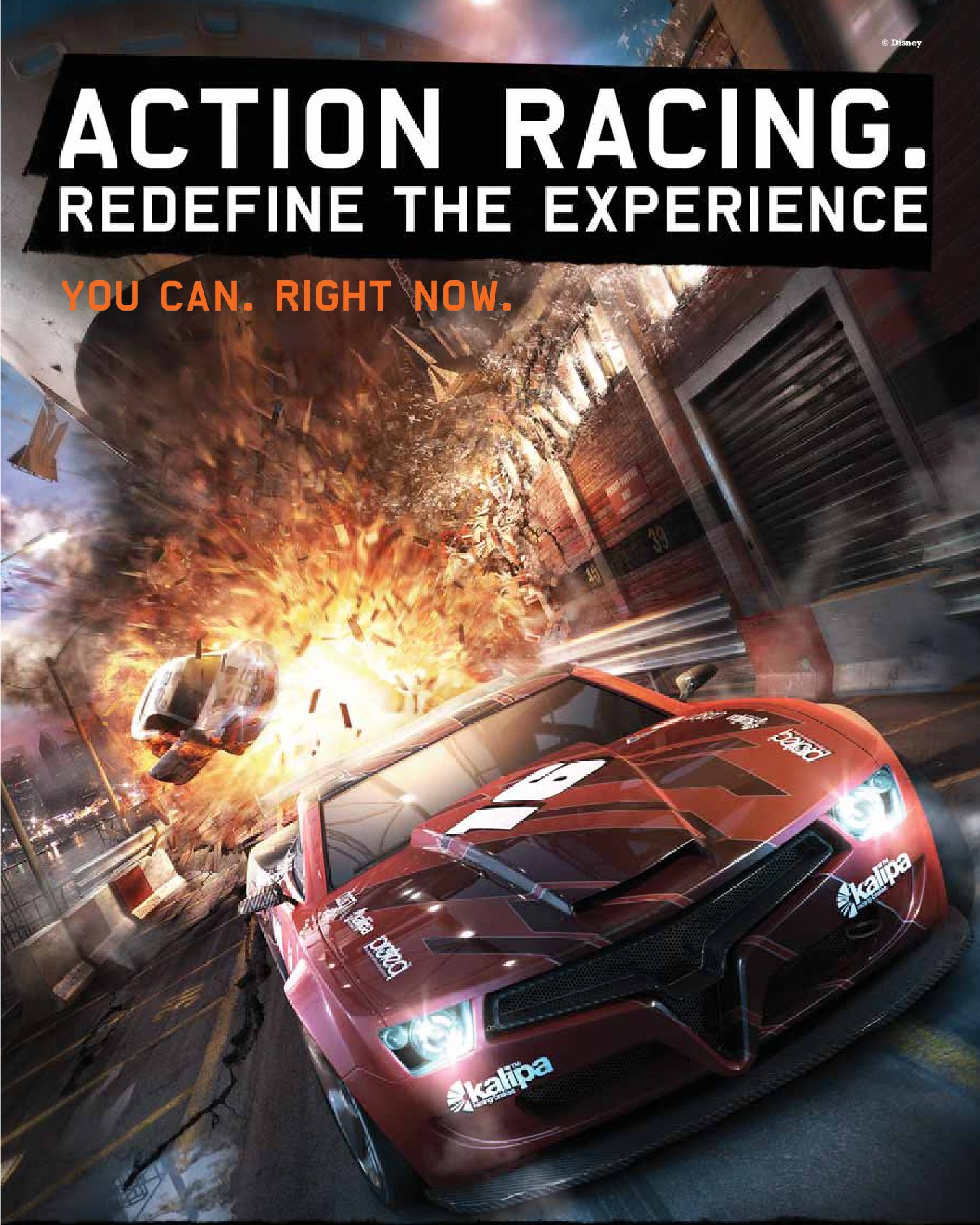
BLITZ TECH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ALPHA

ADVENTURES IN GAMES DEVELOPMENT: NEWS, VIEWS & MORE

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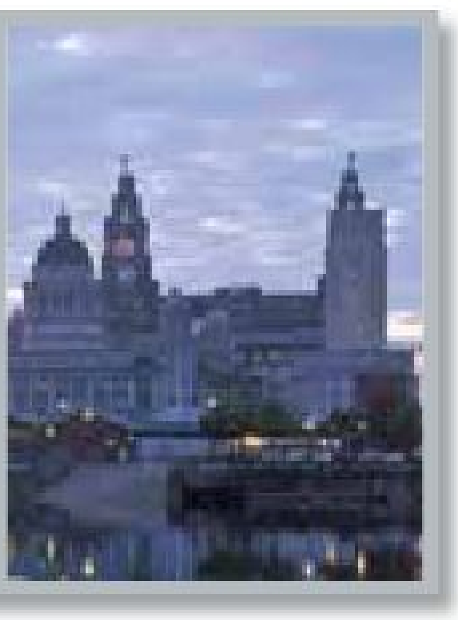


London calls for developers

Industry set to examine the real power and potential of digital distribution at must-attend event later this month

by Michael French

lgc
london games conference
lgc
london games conference

SONY, NINTENDO, Microsoft, leading edge developers, big name publishers, and pioneers of digital distribution will all form part of a wide-ranging programme at the first ever London Games Conference on Tuesday, October 27th.

Taking place at BAFTA and sub-titled Digital Distribution and the Future of the European Games Market, LGC will be the biggest standalone UK event dedicated to the issue that is currently top of the industry's agenda.

From developers through to retail, digital distribution is a disruptive force empowering studios and throwing into question many elements of the traditional business model.

The London Games Conference, a one-day event designed to offer as much networking opportunities as food for thought from its speakers, will examine all the issues related to digital distribution.

An impressive and eclectic line-up of speakers, panellists and topics have been chosen, including how established firms are adapting to the emergence of online sales, and how specialist companies and new business models are rising up to challenge them.

The event, which takes place at BAFTA in Piccadilly, starts at 5pm with an opening address from Ed Vaizey, the shadow minister for culture, who will outline the Conservative Party's plans to support the industry.

Vaizey said: "I'm delighted to be speaking to the London Games Conference. The games sector is one of the most successful creative industries in the UK, but it has been forgotten by Government.

"While Canada and France aggressively compete to attract talent, all our politicians can talk about is video games violence.

"Yet games should be a dream for a politician – it recruits people qualified in difficult subjects, like maths and computer science; it's regional; and it's successful and world-beating. Government backing should be a no-brainer."

Other highlights include a session chaired by former Sony Computer Entertainment boss Phil Harrison looking at the decline and possible demise of physical media.

A special panel discussion will also feature the three hardware kings, Nintendo, Sony and Microsoft, discussing their online gaming services and plans to expand them (*full schedule to the right*).

Tickets, priced at £229, are selling fast. To secure your delegate place, please contact **Rob.Baker@intentmedia.co.uk** or call 01992 535647. Discounts are available for ELSPA and Tiga members.

londongamesconference.com

LONDON GAMES CONFERENCE

Tuesday, October 27th at BAFTA, 195 Piccadilly, London

4:30pm – Registration

5:05pm – Opening Address
Ed Vaizey, Shadow Minister for Culture
The man who may well be the games industry's next voice in government talks directly to the London Games Conference for the event's opening speech.

5:10pm – The Future of Digital Distribution
Nick Parker, Parker Consulting
Where are we headed next? One of the games market's most respected analysts outlines the current digital distribution landscape and offers up exclusive pointers to the future of the sector.

5:35pm – Daddy, What's a Disc?
A panel discussion on the death of physical media and the business models that will replace them.
Host: *Phil Harrison, former president of Sony Worldwide Studios*
Panellists: *Kristian Segerstrale, CEO and co-founder, Playfish; Mark Gerhard, CEO, Jagex; Thomas Bidaux, CEO, ICO Partners*

6:10pm – Coffee

6:30pm – The New Food Chain
Video games will still be made, sold and distributed. But not like they have been. This panel discussion will look at the new lines of demarcation between development, retail, publishing and distribution.
Host: *Andy Payne, ELSPA*
Panellists: *Charles Cecil, CEO, Revolution Software; Nick Pili, Network Director, SEGA; Gian Luzio, Product Director, The Hut; Rich Keen, Marketing Director, Direct2Drive*

7:00pm – Charting the Progress of PC Downloads
Dorian Bloch, GfK-ChartTrack
The man behind the UK games sector's invaluable sales charts (and holder of vast amounts of market data) talks on how digital distribution is the future of the PC games market – and makes a forceful case for a industry download chart.

7:20pm – Outside the Box
Key figures from the market's three established format holders discuss their roles in the brave new digital future.
Host: *Tony Mott, Edge*
Panellists: *Pete Edwards, Director, PlayStation Home, SCE; Neil Thompson, Senior Regional Director, UK & Ireland, Microsoft; TBA, Nintendo*

8:00pm – Dinner and Networking

Editorial

Economy of scale

Over 200 people. That's the largest number of people we've ever featured on any one cover of *Develop*. (Unless you're counting that time we used a picture of planet Earth – which I'm not.)

This is the team behind *Assassin's Creed II*, which is undoubtedly one of the year's biggest games. Therefore one of the year's biggest most expensive productions.

No surprise there given that it comes from the world's biggest studio, Ubisoft Montreal.

While some insiders reckon the real number of those working on this sequel is double the official number of 250, Ubisoft dodges some of the important questions about how it manages production.

That's perhaps understandable given that the console version of the title is likely only just complete – it's due in a month. And the biggest challenge facing the team right now is making sure its hundreds of staff work in tandem as the project hits its most crucial point.

But where do we draw the line when it comes to sprawling team sizes? Is 200 too many? Is 400? 600?

Listen to the digital download developers, however, and you realise it doesn't always have to be this way.

WiiWare, DSiWare, plus Steam, Xbox Live Indie Games, iPhone and now PSP Minis are all proving that you can be just as better-faster-more with teams that are smaller-cheaper-focused.

Sure, those games aren't being developed in tandem with movie spin-offs. Nor are they expected to form the bedrock of a codebase for an entire global publisher.

But breakout hits in the digital space – like Frontier's *LostWinds*, which is surprisingly the posterchild for WiiWare but isn't developed by Nintendo – are proving that big hits don't necessarily need to be the big budget ones.

Would ten different games made on a tenth of the budget dedicated to *Assassin's Creed II* generate the same amount of cash Ubisoft expects it to? Maybe not – or at least, it's hard to tell at this nascent point in the online marketplace.

But one thing's certain – with so many new routes open to games developers now, digital distribution will help the games industry find out.

Michael French
michael.french@intentmedia.co.uk

Michael

Microsoft revs up

Format-holder wants more developers working on titles that use the

by Michael French

WINDOWS 7 can help boost a renaissance in the development of PC games, according to Microsoft.

Speaking to *Develop*, the firm said that tweaked features to the developer-facing aspects of its Games For Windows service puts the power back in the hands of games developers.

All of which makes Windows an attractive development platform once again. Which is convenient, because Microsoft is preparing to launch Windows 7 at the end of the month.

"Before we even started working on Windows 7 we took a good look at how we launched the previous operating system, and tried to take some lessons from that," director of consumer product management for Windows, Parri Munsell, told *Develop*.

"And one of the first things we really understood is that to make Windows 7 truly successful we had to work closely with our partners, and that starts with the hardware partners and the gamers."

So Microsoft has introduced new technical guidelines and a self-certification option for Games For Windows.

Now all studios can take advantage of PC-based online multiplayer functions, Achievements and content marketplace, without having to go through Microsoft.

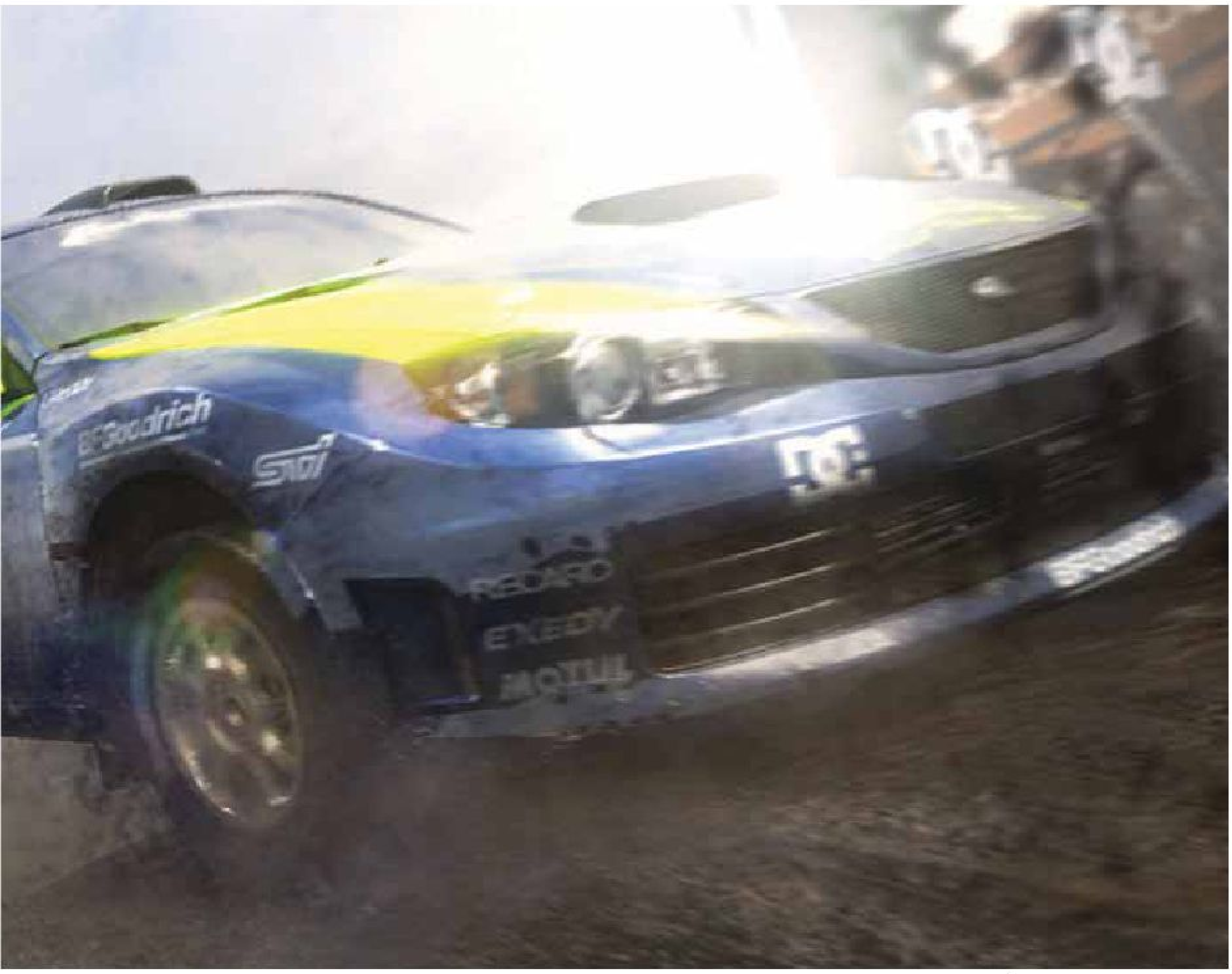
Previously, only 20 agreed and approved studios were on board.

Explained Munsell: "That programme was originally designed for major developers and we had one-to-one relationships with a couple of really big publishing partners. But the reality is that the gaming industry is much broader than that, and what we want to do is recreate a new programme that allows all

> ***"We are absolutely convinced that Windows 7 is a stronger gaming platform."***
>
> Parri Munsell, Microsoft

for Windows 7 devs

Games For Windows service and utilise advantages of DirectX 11



Munsell (inset) says Codemasters' Dirt 2 is a good example of how DX11 and Windows 7 helps developers succeed

publishers and developers – from indie up – to take full advantage of the Games For Windows toolset.

"The biggest change we are making here is that we are democratising the toolset, allowing many, many publishers to take advantage of this. We expect over the course of the next year that we will have many more Games For Windows publishers as far as the programme is concerned. And hopefully they can enjoy some of the benefits of that."

Microsoft has also tipped DirectX 11, which launches with Windows 7, as key to helping developers break boundaries on PC.

"The gaming industry is one of those areas of the business that is so competitive, you have to have a great idea and a great execution," Munsell added.

"And we look at DirectX 11 and Windows 7 as helping with that great execution part. There is a lot of great ideas out there, but the consumers at the end of the day are only going to vote for the publisher that is pushing the limits."

Specifically, Munsell pointed to Microsoft's recent collaboration with Codemasters to prove how closely it has worked with the industry to make DirectX 11 a success for both its platform and third parties.

"*Dirt 2* will be a full DX11 and Games For Window title. It takes full advantage of Windows 7 and DX11 cards, such as the one ATI recently announced. And the results have been a new level of realism that you've never seen before on any platform.

"We are working closer than ever with partners and seeing some really exciting things that will happen in 2010 around DX11."

Windows 7 also features compatibility with that other hot topic, touch screen interfaces, which Microsoft says complements gaming.

"You probably wouldn't use it in a first person shooter, but for simulation or causal gaming or in children's games, it can be super valuable," he added.

In all, the reinvigorated approach to gaming on PC and Windows is a significant step change from Microsoft's attitude when it came to the previous incarnation of Games For Windows and its Vista OS.

"One of the things we have learnt from our previous launch is that we want to make sure we can go out with claims that can be backed up with real world examples.

"From the smallest two person team up to these $10 million efforts we want to make sure we cover the whole breadth of developers.

"We are absolutely convinced that Windows 7 is a stronger gaming platform, and you will hear Microsoft talk a lot about it over time."

www.microsoft.com

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The truth about tax breaks?

Tiga and NESTA have published their survey into what benefits a Government subsidy for games production would give the industry. **Rob Crossley** crunches the numbers for the highlights…

A UK GAMES tax break won't just make it cheaper to develop software – it will attract further external investment and more uniquely British games, according to a new survey.

Published by NESTA and compiled by Games Investor Consulting plus other agencies, key representatives from across the industry were interviewed for their views to help collate evidence on how subsidies would impact the future of the sector. The likes of Activision, Sony, Microsoft, Bethesda, Eidos, Ubisoft, Realtime Worlds, Bizarre Creations, Codemasters, THQ, Frontier, Rebellion and Sports Interactive were all involved.

Develop has published the full report online at www.develop-online.net – but here you can read some of the key figures and statistics that emerged from the document.

89% The percentage of all surveyed that believe a tax credit for cultural games would lead to increases in their staff numbers.

75% Three quaters of the indie developers surveyed beleive that a tax credit for cultural games would help them to keep hold of original IP that they produce.

100% All third party development managers claim that a tax credit would increase their companies' funding of externally contracted projects, and could make the difference between investing in and passing on a UK games development opportunity.

80% The portion of surveyed senior publisher executives who claim that tax credits would boost their funding for development in both internal and independent studios across the UK.

33% A third of all surveyed claim that the UK's 'brain drain' will, over time, have a detrimental impact on the quality of video games development in the UK.

75% Nearly three quarters of all respondents believe that original IP generation in the UK has been in decline or stopped altogether in recent years.

60% The proportion of third party development managers who state they've not published any new original IP from UK studios in recent years.

25% The portion of all respondents that are optimistic about the potential of less expensive networked gaming platforms (such as mobile and online) as new outlets for original IP.

80% The proportion of surveyed third party development managers at publishers that consider the availability of government assistance when deciding which studio to work with.

■ *For an in-depth analysis of these stats, turn to page 14.*

To read more statistics from the tax break report, head over to: tinyurl.com/dev-nesta-nos

The full report can be found at: tinyurl.com/dev-nesta-rep

Also, Tiga's take on tax breaks is at: tinyurl.com/dev-tiga-tax (All links point to Develop Online).

DEVELOP DIARY

YOUR COMPLETE GAMES DEVELOPMENT EVENT CALENDAR FOR THE MONTHS AHEAD…

MONTREAL INTERNATIONAL GAME SUMMIT 08

MONTREAL INTERNATIONAL GAME SUMMIT
November 16th to 17th
Montreal, Canada
www.sijm.ca

Offering some 80 courses, seminars, conferences and workshops, the Montreal International Game Summit returns for its fifth year, and focuses on conducive learning, networking and discussion.

Attended by over 30 firms exhibiting their goods, the Canadian event will feature sessions from high-profile studios including Maxis, Valve, Square Enix and Media Molecule.

Attendees can also take advantage of a selectiopn of additional events, such as a VIP gala, cocktail parties, specialised meetings and numerous other oppotunities to share thoughts and opinions with the country's leading industry figures.

OCTOBER 2009

HANDHELD LEARNING 2009
October 5th to 7th
London, UK
www.handheldlearning2009.com

GDC CHINA 2009
October 11th to 13th
Shanghai, China
china.gdconf.com

CASUAL CONNECT KYIV
October 22nd to 24th
Kyiv, Ukraine
kyiv.casualconnect.org

LONDON GAMES FESTIVAL
w/c October 26th
London, UK
www.londongamesfestival.com

LONDON GAMES CONFERENCE
October 27th
London, UK
www.mcvuk.com/events

BEST OF BRITISH
October 28th
London, UK
www.gamehorizon.net

CASUAL GAMES FORUM
October 29th
London, UK
www.casualgames-forum.com

NOVEMBER 2009

DEVELOP IN LIVERPOOL
November 5th
Liverpool, UK
www.developconference.com

NEON DIGITAL ARTS FESTIVAL
November 12th to 15th
Dundee, Scotland
www.northeastofnorth.com

MONTREAL GAME SUMMIT
November 16th to 17th
Montreal, Canada
www.sijm.ca

DECEMBER 2009

GAME CONNECTION EUROPE
December 8th to 10th
Lyon, France
www.game-connection.com

THE DEVELOP QUIZ
December 21st
London, UK
www.develop-online.net

FEBRUARY 2010

DICE SUMMIT 2010
February 17th to 19th
Las Vegas, US
www.dicesummit.org

MARCH 2010

GDC 2010
March 9th to 13th
San Francisco, US
www.gdconf.com

MAY 2010

GDC CANADA 2010
May 6th to 7th
Vancouver, Canada
www.gdc-canada.com

JUNE 2010

E3 2010
June 15th to 17th
Los Angeles, US
www.e3expo.com

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vacancies at www.monumentalgames.com

World*View*

Our monthly digest of the past month's global games news…

DEALS

Washington-based US developer **The Amazing Society** has picked the **Unity** engine for the creation of its upcoming *Marvel Super Hero Squad* MMO.

Funcom has signed a deal with **Geometrics** to integrate the latter's Enlighten real-time radiosity solution into multiple future titles, starting with *Age of Conan*.

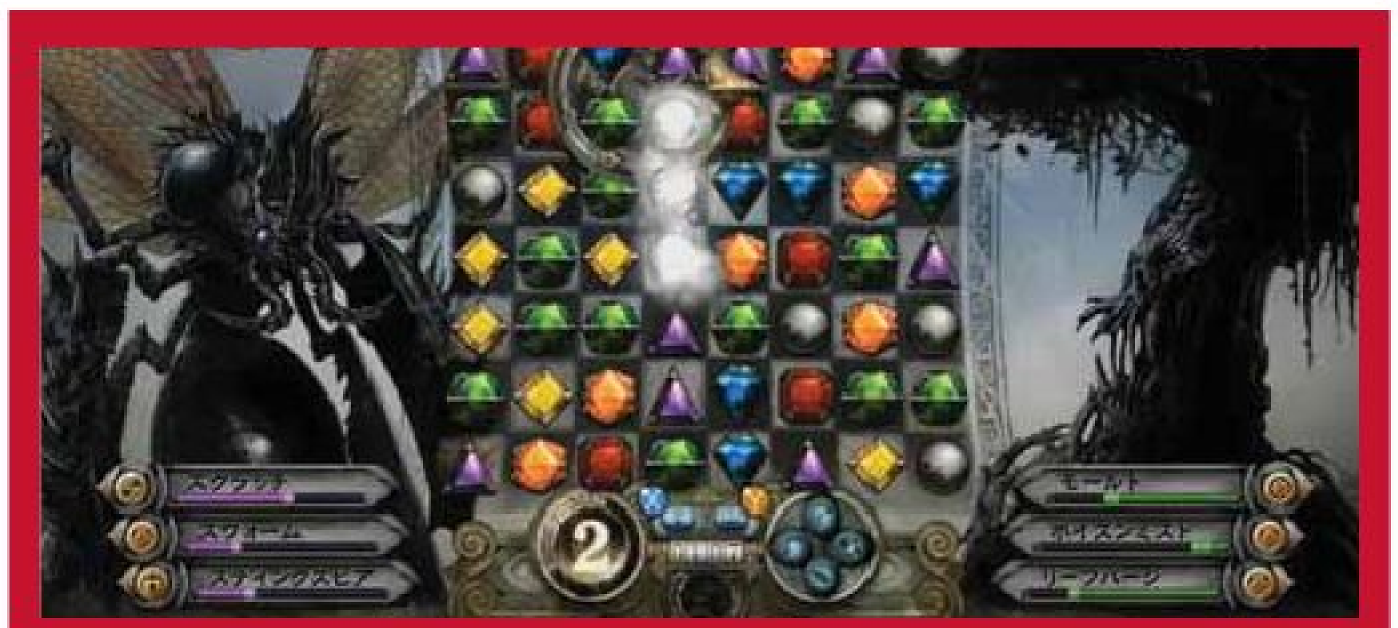
Sony has confirmed a deal with Vicious Engine creator **Vicious Cycle** which will offer studios creating PSP Minis titles the tech at a discounted rate.

Zattikka has hit the ground running – with its first move in games being the acquisition of iPhone and Flash specialist **Gimme5Games**.

Intel's funding arm, Intel Capital, is investing $500,000 in Canadian group **TransGaming** to develop a rival to cloud-gaming service OnLive.

Canadian developer **Frima Studio** has signed **WWE** talent to star in its new Wii exercise package *Stratusphere Yoga*.

Sony as signed up US independent studio **Bluepoint** to help with the development of retooled versions of its acclaimed *God of War* PS2 games for the PS3.



SQUARE AND POPCAP TEAM UP

In a partnership that would have been unimaginable in the not-too-distant past, core gaming specialist Square Enix has joined forces with casual behemoth PopCap to bring a new title to Xbox Live Arcade that very much fuses the traditions of both companies.

Gyromancer is described as a 'puzzle-RPG' that blends elements from block-puzzler *Bejeweled Twist* and the RPG predications of Square's heritage. Players assume the role of a summoner who must defeat beasts by completing puzzles.

"*Gyromancer* is a really enjoyable game for Xbox Live and it's great we're able to bring another type of RPG to the console," stated Square Enix's VP of brands for PAL regions Larry Sparks.

"Its mix of puzzle/RPG gameplay will attract both traditional RPG fans and the more casual gamer."

PopCap CCO Jason Kapalka said: "We've worked with Square Enix as a distribution partner in Japan for several years, and it was fun to collaborate with them in a more creative way on *Gyromancer*."

www.popcap.com

UNITED STATES

MICROSOFT BUILDING SOFTWARE TEAM FOR NATAL

Microsoft is fast expanding its resources for Project Natal.

In the space of seven days, the company has posted a total of 15 new job vacancies on its official webpage, with each one related to the highly anticipated motion control tech.

Microsoft says on the job postings that it is "building a new team" for the Natal division.

The firm is looking for a "wide array" of talent, seeking a senior game designer, a senior level designer, and various other roles.

www.xbox.com

FINLAND

RED LYNX CELEBRATES TRIALS HD'S SUCCESS

The promising sales figures for *Trials HD* exemplifies the opportunity provided by digital distribution.

That's according to Tero Virtala, CEO at the popular motorcross game's Finnish developer RedLynx, which has long specialised in physics-base driving games.

Some 300,000 copies of *Trials HD* have been sold on XBLA since August.

"We're a smaller, 25-person multiplatform studio, and for us this is an excellent example of how digital download space opens up significant opportunities that might not otherwise be available for creative and talented smaller teams," said Virtala.

www.redlynx.com

CANADA

DICE CO-FOUNDER FORMS NEW CASUAL STUDIO

Former founder of Sweden's celebrated developer DICE Fredrik Liljegran has set up a new studio, Antic Entertainment.

Already courting hype thanks to its free-to-play RTS *Junk: Battles*, Antic is working on a range of titles for browser and iPhone.

The company, which is located in Ontario, is also co-owned by Mark Mikulec and Jeff Evans, both of whom formerly worked for Canada's Digital Extremes.

"I am thrilled to officially announce not only our new development studio but also our first title *Junk: Battles*," Liljegren said.

www.anticentertainment.com

UNITED STATES

PLAYFISH EXPANDS TO SAN FRANCISCO

Facebook gaming expert Playfish is to open a new studio in San Francisco. It will be the firm's fourth development outfit, following offices in London, Beijing and Norway. The firm already has a business developer office in San Francisco.

The company, one of the biggest players in the fast-growing gaming audience playing social networks, said it will draw from the "Bay Area's considerable talent resources to create original social games for friends to play together on platforms such as Facebook, MySpace, Bebo, iPhone and Android".

www.playfish.com

SWEDEN

SWEDISH STUDIOS FLOURISH DESPITE DOWNTURN

Swedish studios have bucked the recession with positive gains in turnover and workforce, according the nation's industry body.

A study of 104 game development companies in Sweden shows that, collectively, the sector enjoyed a 21 per cent increase in turnover during 2008, reaching 1.2 billion kronor.

The report also notes a "spike in staff recruitment", climbing 17 per cent to 1353 total employees.

The report was published by the Swedish Games Industry in its 2008 annual game developer's index.

www.dataspelsbranschen.se/eng

UNITED STATES

ATARI AND TURBINE LOCK LEGAL HORNS

A dispute over Atari's promotion and support of Turbine developed MMO *Dungeons & Dragons Online: Stormreach* has resulted in claims and counterclaims that have the two companies at a legal deadlock.

Initially, Turbine filed a lawsuit that claimed Atari's responsibility as a publisher had been inadequate in supporting *DDO:S*.

Undeterred, Atari has issued a statement of defense which dismisses the accusations as 'frivolous', and has suggested that the MMO developer owes it money.

www.turbine.com

FOR THE LATEST NEWS…
HEAD TO WWW.DEVELOP-ONLINE.NET

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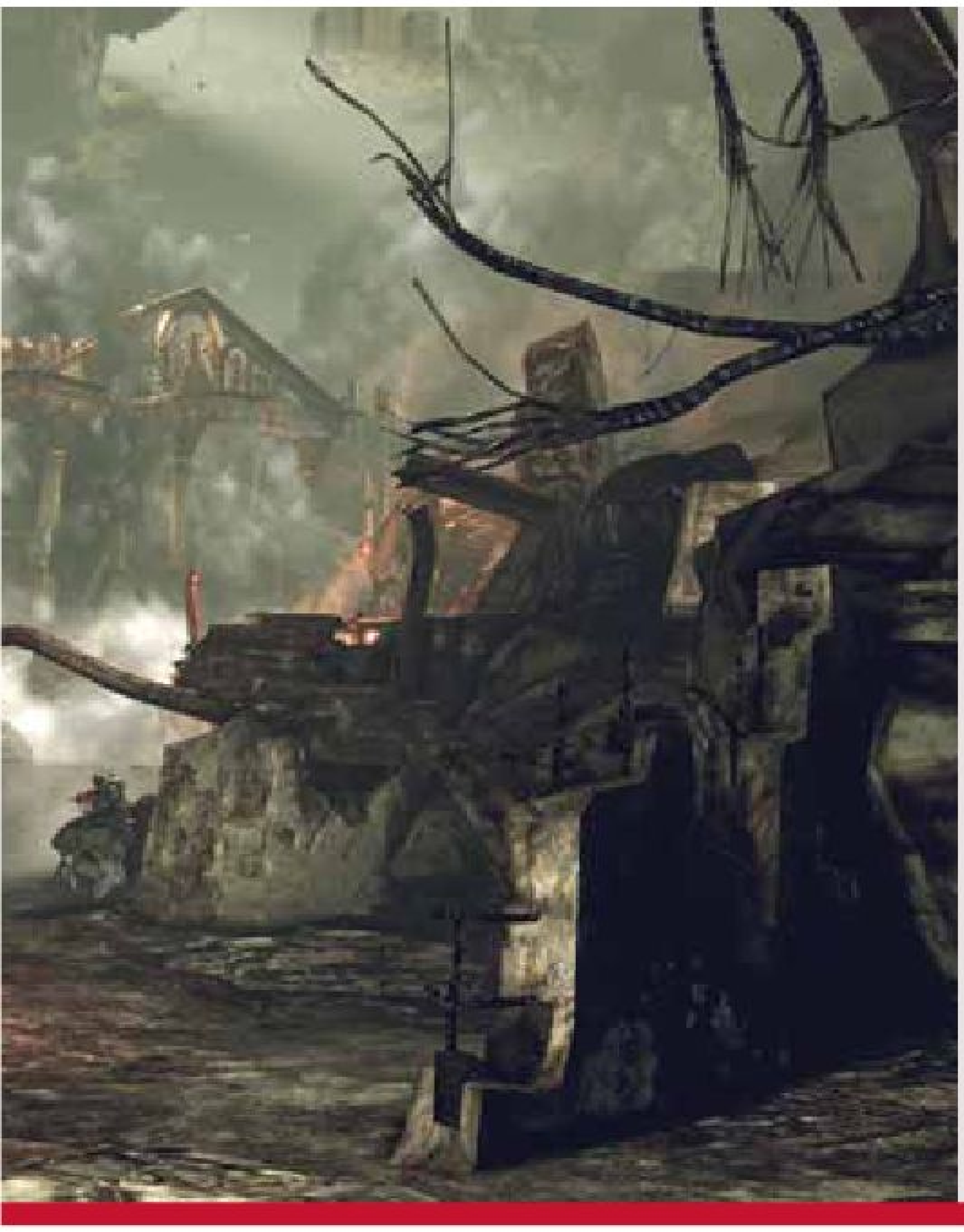

EPIC GAMES TO OPEN NEW TOKYO OFFICE

Epic Games has founded a new Tokyo office in its latest bid to expand the company's presence in Eastern territories.

The studio will initially establish an Unreal Engine business from within Japan, ramping up local sales and support for the game engine.

"Epic Games has an expectation of much closer relationships with Japanese studios," said the firm's president Mike Capps, speaking at a Tokyo Game Show keynote.

The TGS talk – entitled 'Adapting the Gears of War Franchise for Global Consumption' – also saw Capps hint at future Japan-based game development operations.

"We may have secret plans to hire some Japanese game developers too," said Capps.

The announcement of a new Japanese studio comes as the games industry becomes increasingly enamoured with, and dependent on, globalised business models.

Japan-based publishing giant Square Enix has typified this growing trend, having acquired UK-founded publisher Eidos this year as well as partnering with UK developer Frontier.

www.epicgames.com

RUSSIA

RUSSIA TO ESTABLISH NATIONAL GAME BODY

Russia is preparing to unite its native game companies under a national umbrella organisation backed by president Dmitry Medvedev's government.

The National Russian Association of Game Industry (NRAGI) is expected to be established by the end of October, during the nation's first ever dedicated games development and business event, the All-Russian Conference on Game Industry

www.acogi.org

UNITED KINGDOM

JAGEX HITS HIGH IN TIMES TECH LIST

MMO firm Jagex has been named as one of the UK's fastest-growing tech companies.

The Cambridge-based studio – best known for its free-to-play MMO *Runescape* – was placed at number 22 in *The Sunday Times*' league table of 100 growing tech companies.

Jagex today enjoys an annual turnover of £32.2 million, a figure which has rocketed from four years ago, when the studio was taking in £5.2 million.

www.jagex.com

CANADA

FUNCOM OPENS NEW MONTREAL STUDIO

Norwegian developer and publisher Funcom, known for its MMO titles including *Age of Conan*, has opened a new online games studio in Montreal.

The firm said it "will build a strong and competent development team that will work on several games in the Funcom portfolio".

www.funcom.com

GERMANY

TRINIGY LEADS THE CHARGE TO DIRECTX 11

German middleware firm Trinigy has announced it is one of the first middleware developers to have built-in support for Microsoft DirectX 11 graphics in its technology, Vision Engine 7.6.

"Our customers consistently express their desire to push the boundaries of in-game graphics," said Dag Frommhold, managing director at Trinigy.

www.trinigy.net

SINGAPORE

$20M MOTION CONTROL R&D PROJECT ESTABLISHED

As many as 200 engineers are set to research motion control tech in a $20 million initiative.

The Interactive Digital Media (IDM) lab, based in Singapore, will be overseen by Chris Taylor, games industry veteran of two decades and CEO of Gas Powered Games.

Taylor described the project, which will support local gaming start-ups, as "one of the most exciting new areas of interactive entertainment research".

www.mda.gov.sg

Giving a DAM: Making In-Game Marketplaces

This month, **Ben Board** looks over the perks of hosting a store for premium DLC…

AS OUR INDUSTRY MATURES, the numbers are getting bigger: expensive licences, ballooning development budgets and enormous marketing spends.

Selling the game to your audience is the primary way of recouping that investment, but there's a burgeoning market in game add-ons such as premium downloadable content (PDLC), which, with informed planning, can give great return for its dev cost, keep your audience thinking about your title between the major releases, and can keep games in drawers under TVs rather than on the trade-in racks where they tempt shoppers away from the shrink-wraps that earn you money.

Our team has lots of advice to offer on good DLC strategy, but here's the message this month: if you offer PDLC, you should have an in-game marketplace (IGM).

There are two good reasons: first, it's very likely you'll improve your sales. Without one, your player must discover its existence, visit Game Marketplace or Xbox.com, find your title's page amongst all the others, and make their purchase decision based on the short descriptions of the offers listed there.

Second, a basic IGM is too simple not to do: a link in your main menu that brings up your title's Marketplace page is not a big task, and if you only have a few self-explanatory offers this 'vending machine' model might be all you need.

Fast food joints have (slightly) bigger menus with (faintly) tempting pictures and (fractionally) more personalised interaction, while classy restaurants spare no luxury, with evocative descriptions, recommendations, and pairings: all options when considering the scale of your own IGM. Features such as seamless content previews, purchase habit tracking and heuristic recommendations can be found in the complex IGMs in the most DLC-heavy titles, usually taking advantage of their XLSP setup.

If you're thinking about DLC, you should think about an IGM. Contact gamesrep@microsoft.com to find your DAM, and more info.

Ben Board is a European developer account manager at Microsoft. He welcomes registered developers to contact him at eudam@microsoft.com.

CASUAL GAMES FORUM

CASUAL
GAMES
FORUM

WHAT?

The Casual Games Forum will explore the opportunities that developing casual games can offer.

The event is all about interacting with other developers – so sessions will encourage discussion and debate – plus there's roundtable lunchtime workshop.

Delegates will take away valuable advice and top tips from leading experts, plus up-to-date info on market trends and forecasts.

The CGF will look at topics including: discussion on the future of casual games; what can alternative platforms to the iPhone offer developers?; building a community around your casual games; the necessary integration of social gaming into your game; the next big thing in portable casual games; and getting the pricing of casual games right.

WHEN?

The forum takes place all day on October 29th.

WHERE?

The Cumberland Hotel, London

CONFIRMED SESSIONS

So You Want to Start a Casual Games Studio?
John Chasey, Finblade

Introducing the iPhone killers
Panel discussion chaired by Chris White, Studio Head, Glu Mobile

Feed the funnel: finding the levers to turn users into profits
Nicolas Lowell, Gamesbrief

State of the Industry Debate
Speaker TBC

PSP Minis: The next (little) big thing in portable casual gaming
Speaker TBC

Why social gaming is no longer just an optional extra
Speaker TBC

Fan-tastic gaming: Building a community around your brands
Speaker TBC

PASSES

Access costs £345 for a delegate pass

www.casualgames-forum.com

DEVELOP IN LIVERPOOL

5 november 2009
develop
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WHAT?

It's a one-day version of Develop in Brighton with three tracks – Art and Design, Coding and Production and Evolve.

Effectively that means it is all the good things about Brighton – great speakers, practical sessions, and a sociable environment – but in a location more easily accessible for the northern and Scottish development communities.

Topics to be covered include: new business models for 2010; supporting the Northern games industry; tips for developing iPhone games; getting more out of social networks; plus real-life case studies. More sessions will be announced soon – check our full preview next month.

WHEN?

The conference takes place all day on November 5th.

WHERE?

Arena and Convention Centre, Liverpool

CONFIRMED SESSIONS

How to Get More From your Music and Audio Team
Panel discussion chaired by John Broomhall, independent audio director and Develop columnist

What Music Can Teach Us About Digital Distribution
Simon Watts, Universal Music

Five App Stores Under the Microscope: iPhone, Blackberry, PSN, Android, WiiWare
Stuart Dredge

Digital Distribution: From Blue Sky to the Bottom Line
Panel discussion chaired by Nicolas Lovell, GAMESbrief

PASSES

Passes are £215 before the October 12th earlybird deadline, and £265 thereafter

www.develop-conference.com/liverpool

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INDUSTRY ANALYSIS SPONSORED BY Bethesda SOFTWORKS

COMMENT: BUSINESS

Tax relief: what the industry said

by Nick Gibson, Games Investor Consulting

The Digital Britain report challenged the UK games industry to provide evidence to support the introduction of a tax relief for games production.

As part of the industry's response, NESTA commissioned Games Investor to conduct a survey of leading games industry figures (whose companies employed around 50 per cent of the UK's total development headcount) and external financiers (VCs, private equity and project finance companies) to assess the potential impact of a tax credit.

We deliberately went to the sources of financing for games development as well as the studios, avoiding cheerleading questions about whether the tax credit would be a positive development (turkeys voting for Christmas) and focusing on how the respondents' companies' recruitment levels, investment priorities, strategies and business models might change. The results, discussed only in summary for this article, provide a fascinating insight into the current and prospective health of the UK games development industry.

PROBLEMS AHEAD

Despite strong pride in what the UK games development industry has achieved to date, there was a unanimous view that the sector is facing mounting problems. The impact of government subsidies for games companies overseas has curtailed the growth of independent and publisher-owned studios in the UK. It's resulted in what appears to be a growing exodus of experienced and high quality staff from UK studios, to studios in government-subsidised territories.

One independent developer relayed a remarkable anecdote to us that illustrates this problem: "Our best technical guy was offered two-and-a-half times his UK salary, 100 per cent subsidised relocation costs and a comprehensive support programme not just for him but also for his wife and children, as well as two years' completely free accommodation to move to Canada. We had to let him go; he would have been mad to stay."

So while the Quebecois have failed to get many British studios to relocate so far – this being 'front door' if you will – studios that benefit from Montreal paying for one in three employees are now coming through the back door to cream off our brightest and best. This, combined with the limited flow of suitably educated graduates from British universities, is creating a damaging and industry-wide skills shortage that has serious long term implications for the ability of UK games companies to create the sort of high quality games for which the UK is globally known.

RESURRECTING UK FORTUNE

However, all of the independents we spoke to foresaw the introduction of a tax credit stimulating headcount growth, and the exploration of the sorts of new direct-to-consumer business models that the advent of network gaming has enabled. They also saw their ability to retain the IPR for their games being improved, in some cases substantially, by a tax credit. This has potentially significant ramifications.

> ***"Tax credit would stimulate growth, innovation and investment in development, and help level the uneven international playing field."***

Key to the problems facing independents and the development industry overall, has mostly been studios' inability to fund and retain ownership of original games IP, and the ever increasing reliance on publishers for day-to-day funding. While licence-based external development work, now the mainstay of most console studios' revenues, provides substantial cash flow value, it is the creation of successful original IP that generates long-term asset value for games companies. The retention of part, or all, of the IPR to successful original titles and the use of self-publishing can ensure that not only does the asset value get retained but also the cash flow value. The tax credit could therefore form a critical role in resurrecting the fortunes of UK independents, addressing the comparative shortfall in UK network gaming ventures and providing potentially self-sustaining business models to help wean developers off their over-reliance on overseas publisher funding sources.

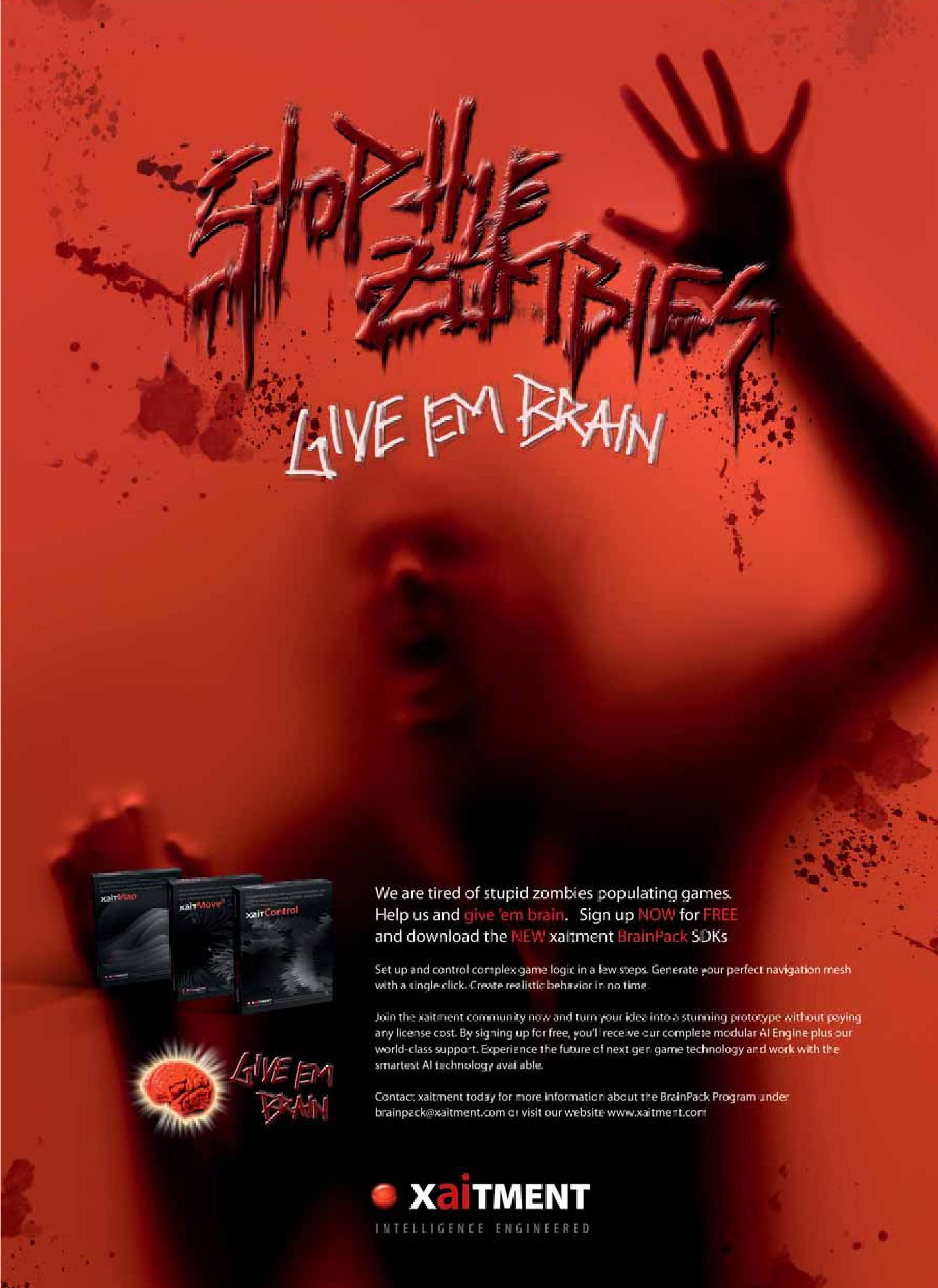
EXTERNAL FINANCIERS

Uniquely for surveys of this kind, we also tapped into our investor network and interviewed external financiers. These respondents highlighted a plethora of barriers to investing in UK games at present, but expressed a uniform belief that the tax credit would trigger increased games investment by the finance industry overall and, in most instances, an improved attitude towards such investments themselves. This complements the finding that most independent developers surveyed would be more likely to seek external finance as a result of the tax credit's introduction. It also neatly lines up alongside the increased exploration of direct-to-consumer network games business models by independents, which some investors are most interested in funding, but which several complained the UK lacks at present.

Despite this universal optimism, few saw the tax credit as a panacea to the industry's problems, nor are these studios under any illusions that all their games will qualify for the credit (to comply with EC legislation, it could only be administered via a cultural test like the existing French games and British film tax credits). However, it seems that a tax credit would stimulate growth, innovation and investment in UK development, and will help level the uneven international playing field.

The Time To Play report can be downloaded for free via www.gamesinvestor.com.

Nick Gibson is a director at Games Investor Consulting, providing research, strategy consulting and corporate finance services to the games, media and finance industries.
www.gamesinvestor.com



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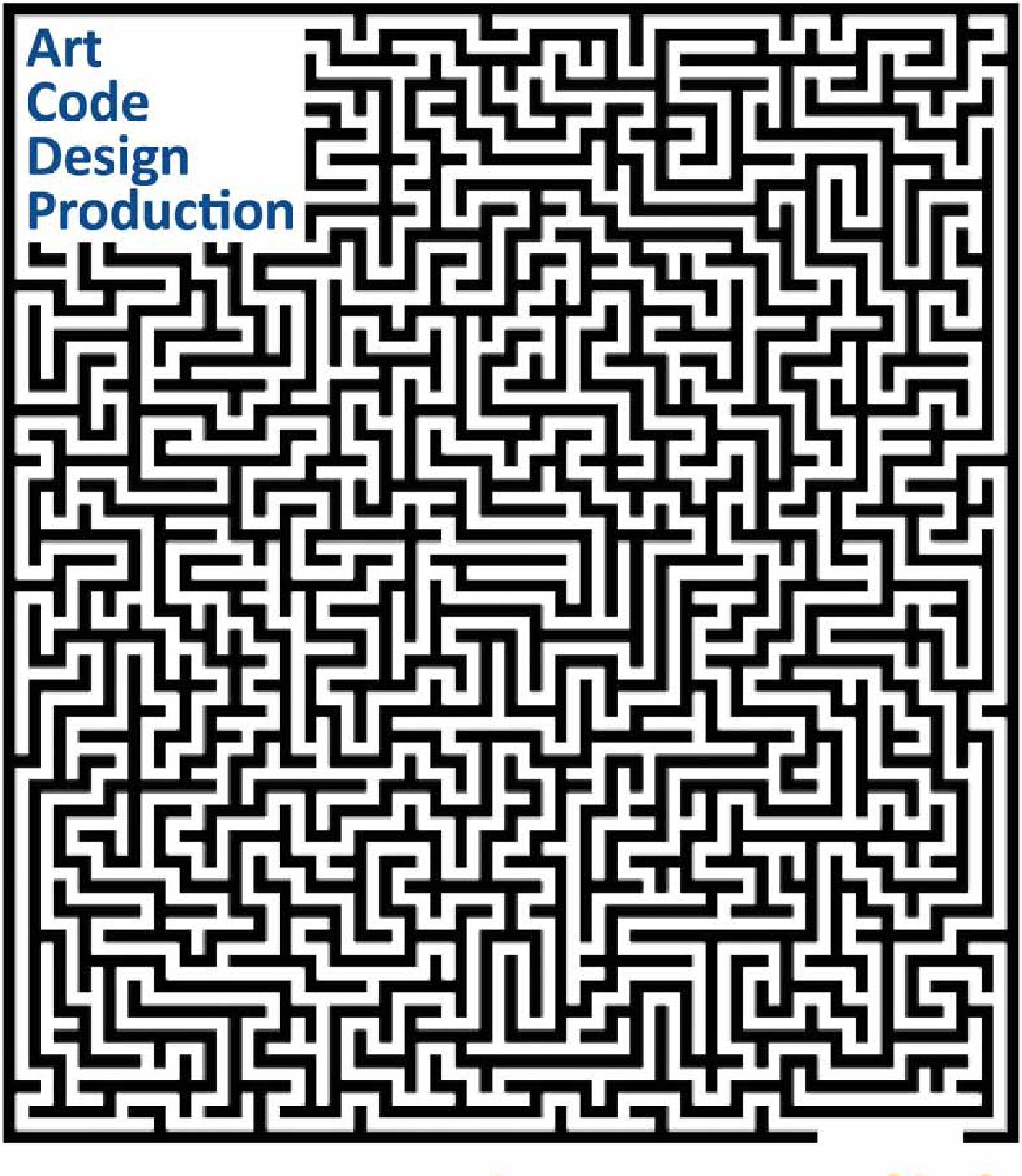
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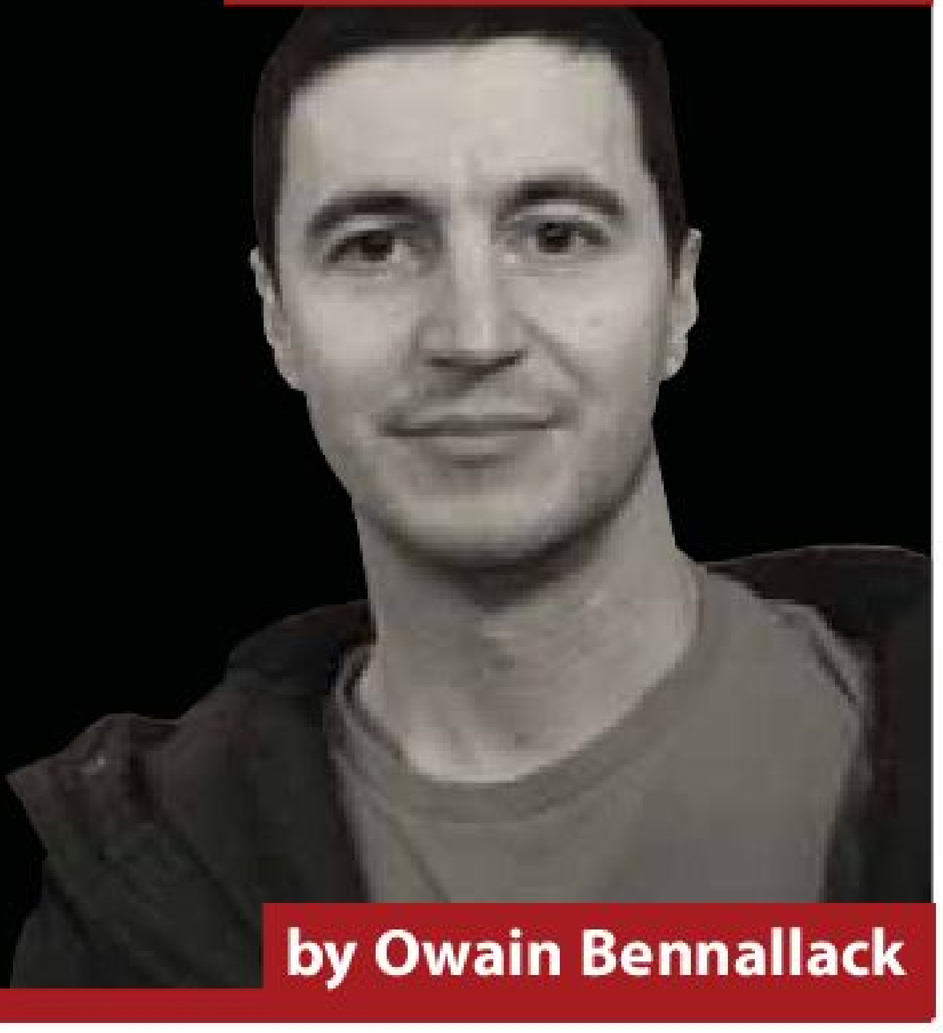
COMMENT: INDUSTRY

Little games with lots to prove



by Owain Bennallack

Five years after its launch, PSP is getting the snack-sized downloadable games it should have boasted from day one.

That's not hindsight speaking. From the start, few thought the fully-featured yet inferior ports of PlayStation 2 games that dominated the early years of PSP were the best fit for a portable platform. You only had to look at what was working on mobile phone, not to mention Nintendo's handheld legacy.

Then again, much of Sony's original PSP strategy was inexplicable – from pricing and its bizarre faith in UMD movies to the initial absence of an on-deck digital store – so perhaps it was all part of a grand bet that went wrong.

If only all flawed games machines sold over 50 million units! PSP is the most successful hardware 'failure' that the games industry has ever known.

Yet I believe PSP has failed, in as much as Sony – father of the Walkman and friend of the masses – has failed to truly exploit, let alone define, portable gaming.

It's been said iPod should have been a Sony product. The same might be said of iPhone's wildly successful games offering, too.

LESS IS MORE

Having come late to the party, Sony's strategy for the snack-sized downloadable PSN games – dubbed PSP Minis, on sale from October 1st – can at least be informed by Apple's digital marketplace.

What's immediately attractive to iPhone developers is the lack of rival titles. Even by Christmas there'll only be 50 or so Mini games available, and they're the result of a Sony charm offensive. Compare that to trying to make your new game stand out among the 65,000 products already on the iPhone's App Store.

More Minis will come: Sony is apparently focusing more on technical checks than game quality with its approval process. This implies less of a gatekeeper role than is usual for console manufacturers.

Yet the relatively high cost of a PSP development kit compared to cheap or free equivalents for Xbox Live or iPhone should deter the riff-raff. Sony is also said to be promising a more transparent approval process than the murky yea-or-nay-ing on iPhone, where it sometimes seems a product is listed or barred depending on whether the backroom boys have a hangover.

Certainly, the sweet spot between *laissez-faire* approval and heavy vetting has yet to be definitively established for digital marketplaces.

Nintendo is also likely to make it easier for smaller independent developers to get games onto its DSiWare channel.

It's rumoured to be doing something a little different again.

According to reports, Nintendo will employ a fluctuating royalty rate that will encourage small games to be priced cheaply and big ones more expensively. It'll do this by associating file sizes with different Nintendo points brackets – if your game is too big for its bracket, you'll have to pay more.

SONY
PSP
SELECT
START

iPhone hit FieldRunners is set to be released in October this year as a PSP mini game

> *"Gaming is inexorably moving towards digital marketplaces, and Apple's App Store has given clues to cons as well as pros of this new world."*

It's classic Nintendonomics – tweaking the market with a mechanism that rewards the big N as a by-product.

More importantly, it should encourage a premium pricing strata, rather than another race for the bottom scenario of price deflation that has so damaged the business case for the iPhone's App Store for professional developers.

LITTLE BIG PLANET

Gamers will always want to see quality titles at bargain prices, of course, and even developers may be more interested in how much game they can squeeze into 20MB rather than business model nuances. However in the long-term, it's the latter that will be the most important outcome of these experiments.

Gaming is inexorably moving towards entirely digital marketplaces, and Apple's App Store has given us a clue to cons as well as the pros of this new world.

Sony and Nintendo are right to bring their platforms a taste of *meze* gaming. But they're also wise to tweak what's on the menu – and how such fare is served. Nintendo in particular will remember the damage wrought by floods of low-quality software in the 1980s.

If the console manufacturers can bring some discipline to the downloadable free-for-all, it will be better for everyone in the long run...

Owain Bennallack is executive editor of *Develop*. He edited the magazine from its launch until its February 2006 issue. He has also worked at *MCV* and *Edge*, and has provided consultancy and evaluation services to several leading developers and publishers. He is also chairman of the Develop Conference advisory board.

INDUSTRY ANALYSIS
SPONSORED BY Bethesda SOFTWORKS

COMMENT: DESIGN

Pitch Perfect

by Billy Thomson, Ruffian Games

In the early years of my career the presentation of my work had always been a fairly small part of my job.

When I started off as a level designer, I simply had to do my job to the desired level of quality and in a timely fashion – there was very little call for us to actually present our work or deal with the press.

Over time I gained more experience which led to the occasional low-key presentation of my work – usually a small part of a much larger game – to a subsection of the team.

Soon after, I had a few minor interviews with the press and some basic input into a couple of pitches to a publisher. For the best part of ten years that was about it, nice and simple and very little pressure.

Then, just before we released *Crackdown*, that all started to change. Over the course of around four months I had to present our entire team's work through a large number of gameplay demos, as well as written, audio and video interviews with the press to get the gaming world interested in the title.

Since the game was released I've had to do numerous pitches, full team presentations and a lot of press interviews, which is looking likely to turn into a lot more in the coming months as everyone seems to want to know more about *Crackdown 2*. It's all been really exciting but, I won't lie to you, at times it's nearly been a case of 'new pants please'.

PITCHES

It all starts with the pitch. I've actually lost count of how many times I've pitched an idea to a publisher in the last year, but while I can't remember the exact number I can vividly remember the anxiety it can bring on when you have to sit down in front of some of the most important people in your industry and sell them your idea.

If I'm honest I think I was rubbish in my first pitch: I had too much information on the slides which I practically read verbatim, and then when asked a question I rambled on for too long about features that I now believe were less important than others. I'm probably being a bit harsh on myself but that's the way I see it now.

Thankfully, I work with some great guys who helped me fine tune the technique to the point that my last pitch had a single line per slide that I talked around rather than read; I applied all my focus on the key areas, answering questions easily and in short time. I'm a long way from mastering the art of the pitch, but I am far more confident in my ability now than I was a year ago.

DEMOS AND INTERVIEWS

Demos are generally pretty easy, providing you have a good, stable build to demo. Unfortunately, more often than not you don't. In the past demos have always seemed to come at a time when the game was not really ready to show. This usually means that, rather than really showing off the highlights of your game, you're actually doing your best to avoid the broken bits while you do the best with what you have.

> ***"I'm never that relaxed around the press, they bring me out in a cold sweat. I've got a tendency to be misquoted. At least that's my excuse."***

Interviews on the other hand can be tricky buggers. For some reason I'm never that relaxed around the press, they bring me out in a cold sweat. Probably because I've got a tendency to be misquoted and end up sounding like a dick – at least that's my excuse. Seriously, just say my name and then the words 'Absolutely, definitely' to anyone I've worked with and they'll piss themselves laughing. The press also seem to love misspelling my surname – there's no 'P' in 'Thomson' – much to my parents' annoyance and the joy of the team at Ruffian.

TEAM-WIDE PRESENTATIONS

This is the one I'm probably most comfortable with. Team-wide presentations are still a little daunting, but I really enjoy having the chance to talk to the entire team and tell them about everything that's planned for the game and for the company moving forward. It's incredible how often people working on a game only know about the small section that they are responsible for. This peculiarity has been a real frustration to me over the years, and is thankfully something we at Ruffian have done our very best to eliminate through constant communication and transparency from the management team right down to the most junior team member.

I know how beneficial these presentations can be to the team, but I also realise that I don't do enough of them due to the heavy workload we all seem to have these days. It's definitely something I hope to address in the coming months.

Regular team-wide presentations are helping shape Crackdown 2 into an explosive sequel

Billy Thomson is the creative director of newly-formed developer Ruffian Games. Billy has over 13 years experience of designing video games, including design roles on *Grand Theft Auto* and *GTA2*, before working as lead designer on Realtime Worlds' celebrated *Crackdown*.
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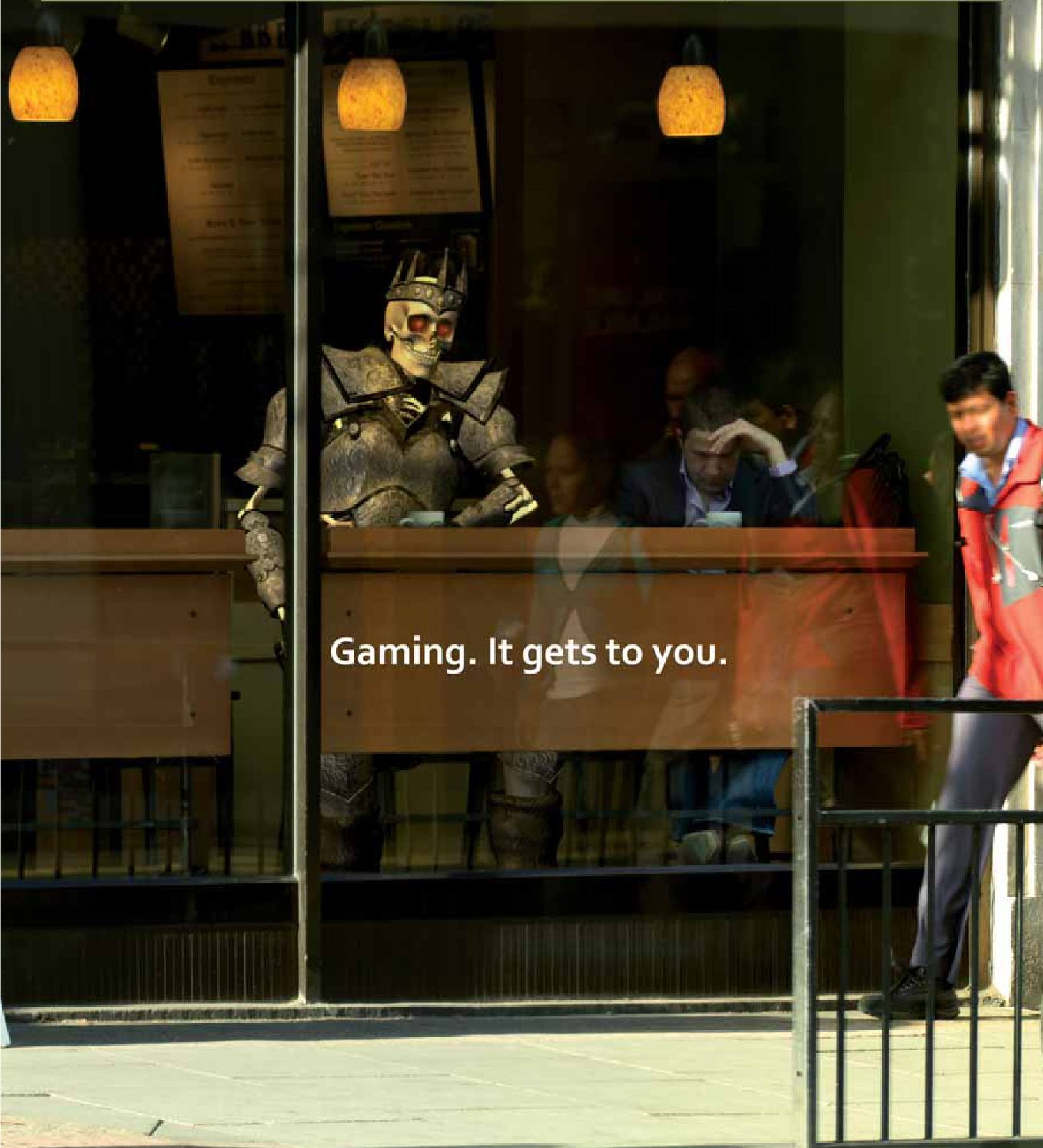

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COMMENT: CODING

Stereoscopic 3D

by David Jefferies, Black Rock Studio

Stereoscopic 3D is a huge topic in the film industry right now. All the studios seem to have a stereo film in production whether it be live action or animated, Siggraph had a whole day devoted to it and Dreamworks has said that even during production it only ever views its films in stereo.

So why is it making such a strong comeback after being discarded in the 1980s? One reason is that the technology has improved. The best technology from the 1980s had a film that was printed with the left eye image above the right eye image on a single filmstrip. The film was shown through a projector with an adapter on the lens that projected the images superimposed on one another through orthogonal polarising filters. The audience wore passive linearly polarised glasses where the left lens extinguished the right eye image and vice versa. The audiences complained of headaches and eyestrain that were primarily caused by two flaws in the technology.

Firstly the linear polarization required the viewer to keep their eyes horizontal; if they tilted their head then the image from one eye would leak into the other. Secondly, the projectors were mechanical devices containing cogs and belts, and this inevitably caused some jitter in the movie. Slight variation on a non-stereo film is not a problem, but on a stereo on the jitter confuses the brain and causes headaches.

Moving to digital cameras that have no moving parts has solved the problem of image jitter. To solve the head-tilt problem the technology moved away from linearly polarised filters to circularly polarised filters. The filter can be polarised with either left or right-handedness and the viewers wear low-cost glasses containing analysing filters (a circular polariser mounted in reverse), where one lens extinguishes the right-handed polarised light and the other lens extinguishes the left-handed polarised light. This technique doesn't exhibit image leakage when the viewer's head tilts.

All in all the new technology is good and is generally able to convince the brain of the stereoscopic nature of the image.

There is, however, one important cue that the brain uses to determine depth that this system is unable to simulate. When the eyes focus on a nearby object the eye muscles contract. The more they have to contract, the closer the object is. Yet when viewing a stereoscopic image, the eyes are always focused on the projector screen and so the brain gets confused signals as to the depth of an object. Visually an object may appear to be very close to the viewer but the eye muscles are telling the brain that they are still focused on the projector screen in the mid-distance.

It is because of these mixed signals that scenes where objects appear to come out of the scene and close to the viewer are kept to a minimum for fear of causing headaches.

> ***"Film makers say stereo's an art not a science, and they're able to tweak the stereo separation in each scene. We don't have that luxury in games."***

NEW LOOK

What's interesting to us in games, is that this polarisation technology is starting to make its way into the living room. Soon there's going to be an update to Blu-ray standards that will allow it to encode stereoscopic movies – now there are increasing numbers of polarising LCDs that can display them.

The polarising LCDs are normal ones with line sequential micro-polarisers bonded to the display. These micro-polarisers change the polarity of each scan-line so that the even lines are left-circularly polarised and the odd lines are right-circularly polarised.

So to render your game in stereoscopic 3D on one of these displays, you need to render the game from the point of view of each eye and interlace the two images so that the left eye image is on the even lines and the right eye image is on the odd-numbered lines. If your game supports split screen then you're already doing the hard part and it is a simple extension to render the left eye in the top horizontal split and the right eye in the bottom horizontal split. A small piece of shader code (*figure 1*) will interlace them together, and six lines of code to support 3D stereoscopic in your game isn't bad.

That's not quite the end of the story. The film makers will say that stereo is an art rather than a science, and that they are able to tweak the stereo separation in each scene to ensure the viewer doesn't get eyestrain. Unfortunately we don't have that luxury in games, so a lot of experimentation is required to find out what looks good for your particular title.

```
// fragment to interlace horizontal split screen
// into stereoscopic format as a post-process
// screen_pos is passed in as VPOS
// which is the screen space pixel position
float offset_amount = frac(screen_pos.y * 0.5)
float2 newuv = input.uv;
newuv.y /= 2.0f
newuv.y += offset_amount;
s = tex2D(texture,newuv);
```

Figure 1, above: A small piece of shader code interlaces the top and bottom horizontal splits

David Jefferies started in the industry at Psygnosis in Liverpool in 1995, eventually working on *Global Domination* and *WipEout 3*. He later moved to Rare where he worked on the *Perfect Dark* and *Donkey Kong* franchises. Next came a move down to Brighton to join Black Rock Studio (which was then known as Climax Racing) in 2003. On this generation of consoles he's been the technical director of *MotoGP'06* and *MotoGP'07* before starting work on new racer *Split/Second*.
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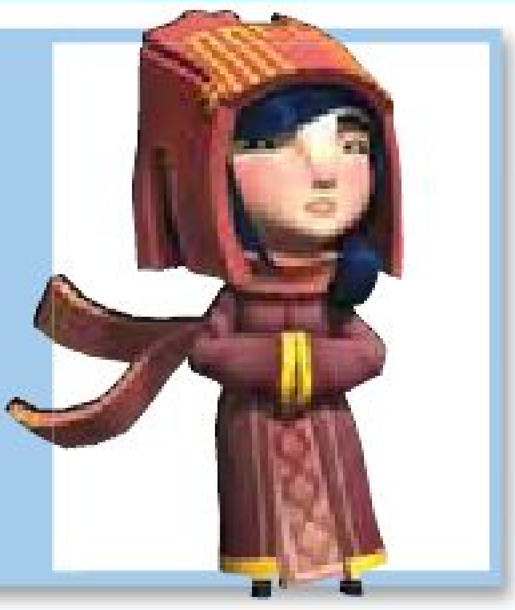
BETA

DEVELOPMENT FEATURES, INTERVIEWS, ESSAYS & MORE

"Game audio teams definitely need a lot more love…"
Jane Gillard, Dolby, p46

Frontier revisits LostWinds

p33

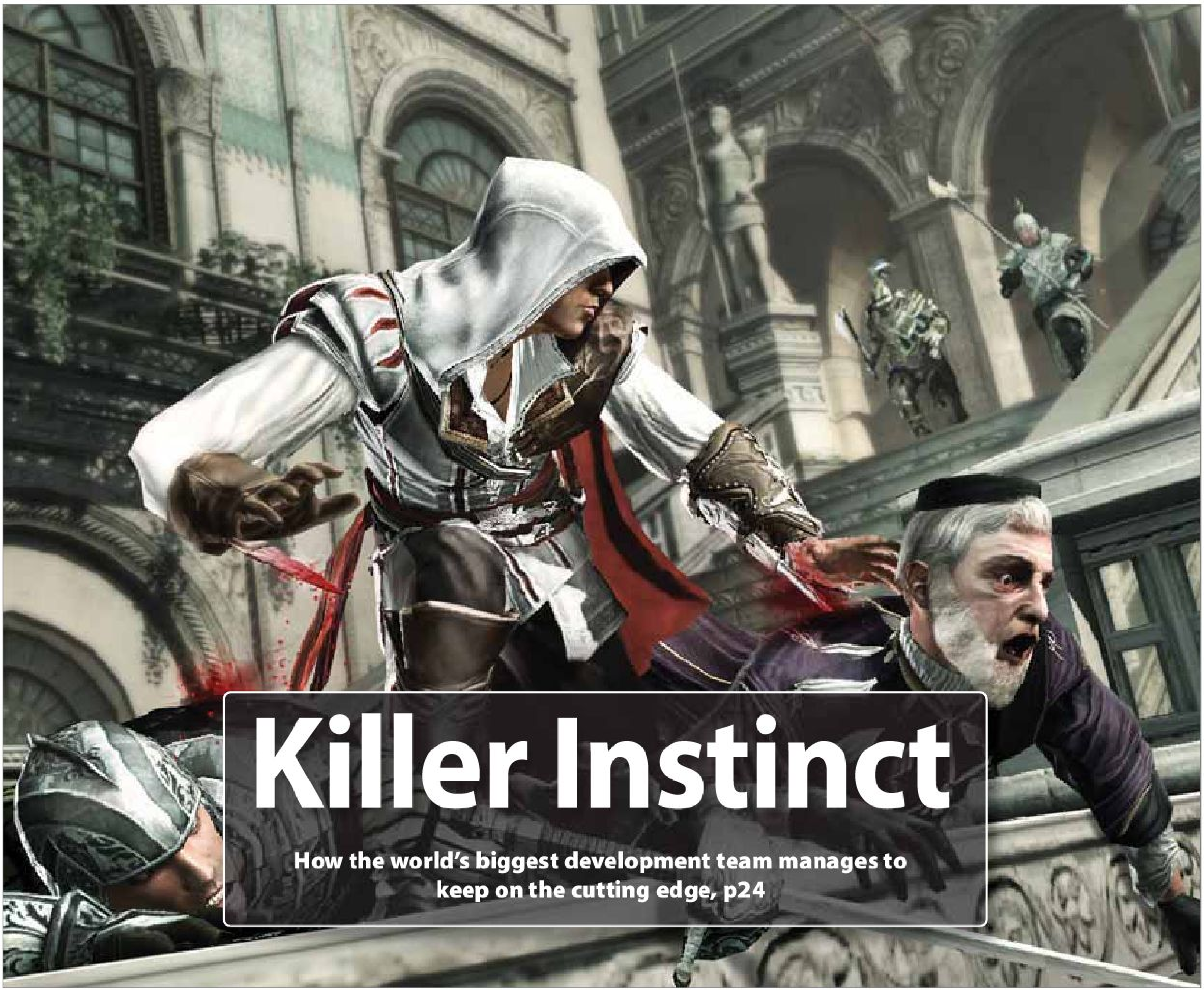


Blitz champions the audio coder

p38

HEARD ABOUT: Inside Bizarre's Blur

p49



Killer Instinct

How the world's biggest development team manages to keep on the cutting edge, p24

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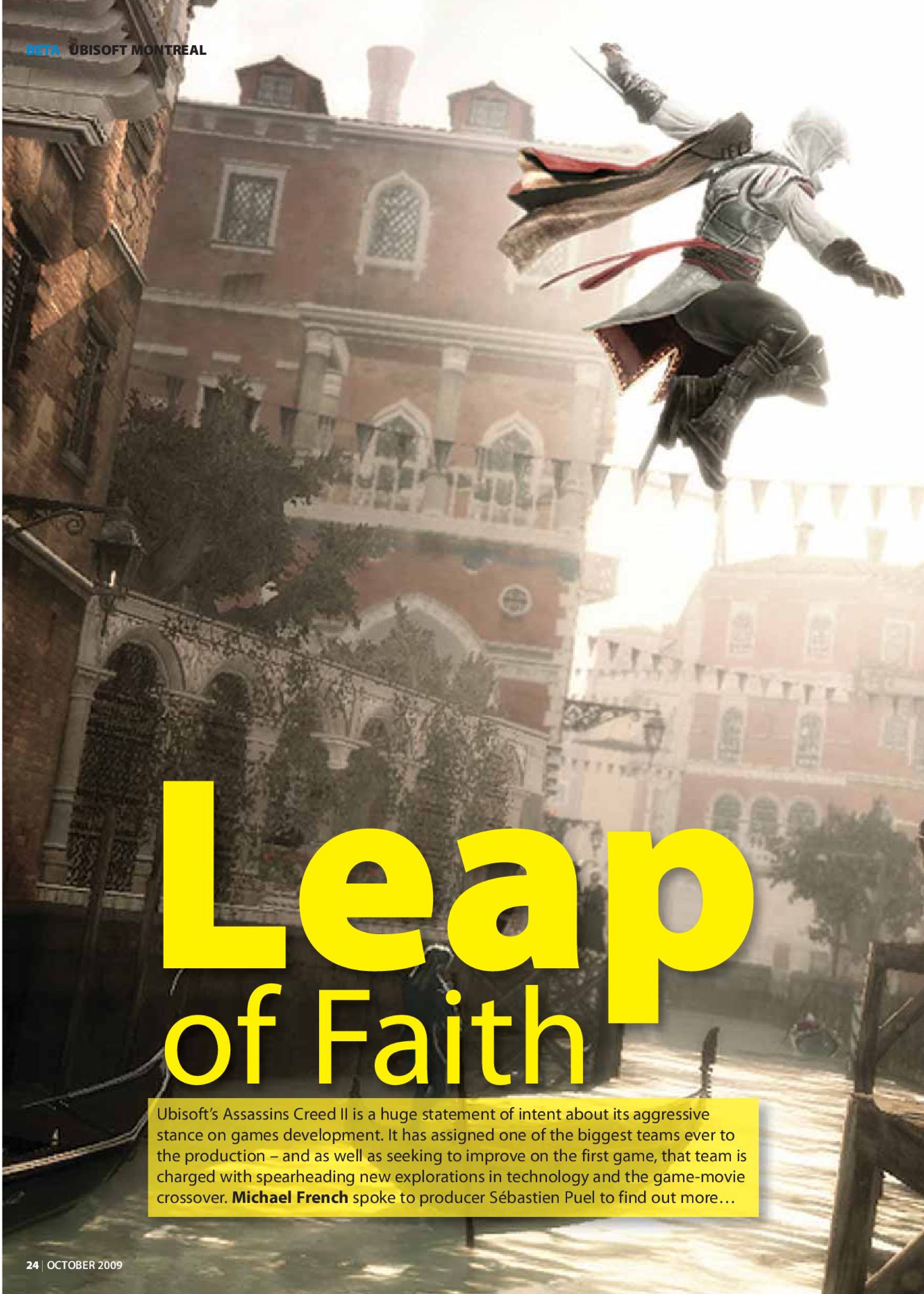


Leap of Faith

Ubisoft's Assassins Creed II is a huge statement of intent about its aggressive stance on games development. It has assigned one of the biggest teams ever to the production – and as well as seeking to improve on the first game, that team is charged with spearheading new explorations in technology and the game-movie crossover. **Michael French** spoke to producer Sébastien Puel to find out more…

Sébastien Puel has worked for Ubisoft for over five years, eventually becoming producer of the first *Assassin's Creed*. As producer on the second game, he is helping oversee the hundreds of staff assigned to the project.

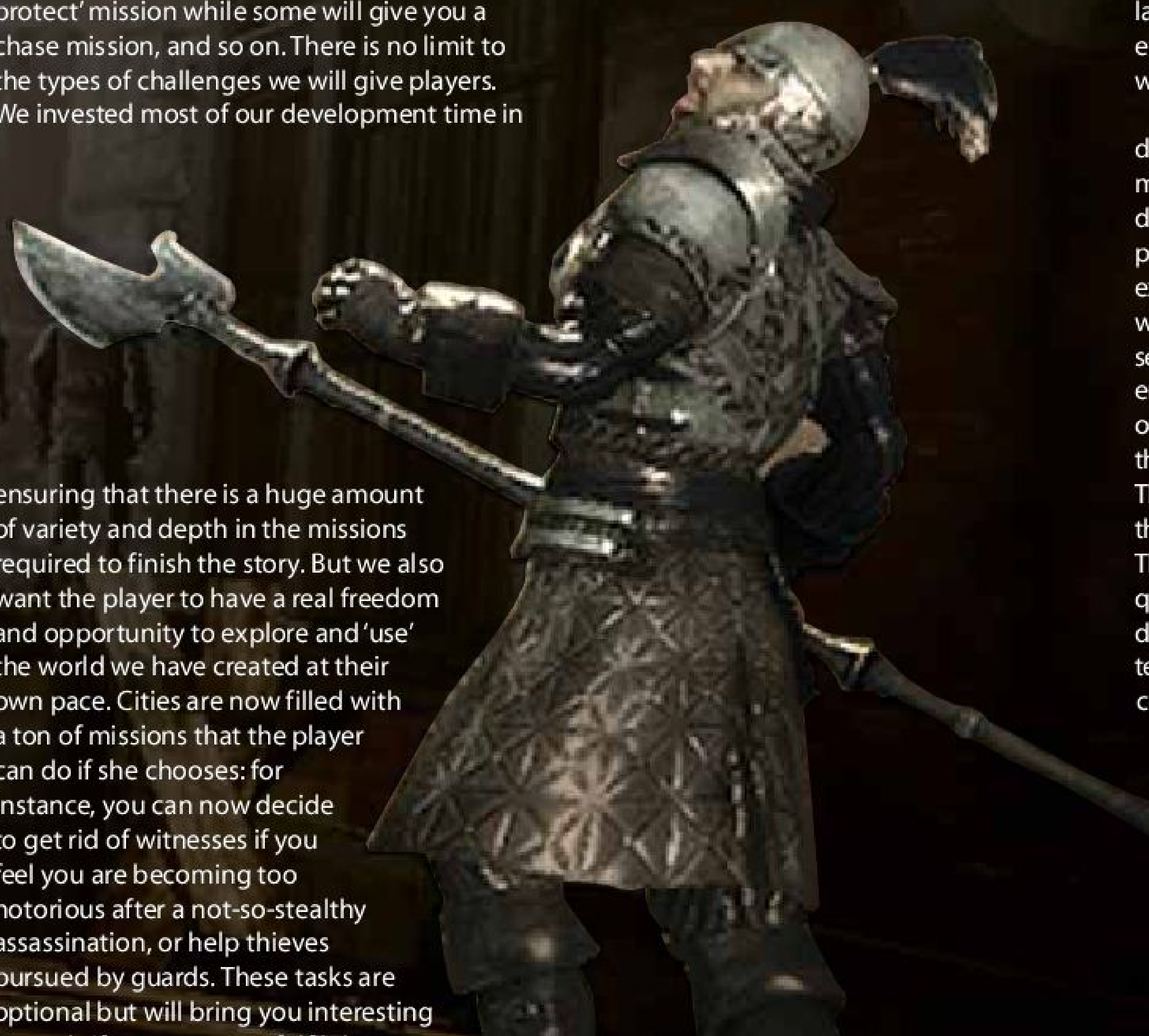
Here he talks about how the game design has been shaped by player feedback and the desire to include tricky historical themes…

You say feedback from the last game has shaped the design of the second. How so?
Assassin's Creed was an astonishing experience; I believe it brought entirely new elements to the industry by allowing players to fluidly navigate an urban environment while enjoying breathtaking views and full freedom of control.

And beyond gameplay innovations in the area of free-running and crowd, the team also pushed for innovation in storytelling. *Assassin's Creed* was the first game to immerse players in a believable and mature experience inspired by historical events.

In *Assassin's Creed II* the game structure and the mission system were the most crucial elements we wanted to improve on. We are redefining the overall mission structure to give gamers a more fun, rewarding and unpredictable experience throughout the game by adding a lot of variety in missions types and changing the way the story and the missions unfold.

There are no more patterns of missions to perform, but rather a story that develops through a great amount of missions given characters. Some characters will give you an assassination mission, others an 'escort and protect' mission while some will give you a chase mission, and so on. There is no limit to the types of challenges we will give players. We invested most of our development time in ensuring that there is a huge amount of variety and depth in the missions required to finish the story. But we also want the player to have a real freedom and opportunity to explore and 'use' the world we have created at their own pace. Cities are now filled with a ton of missions that the player can do if she chooses: for instance, you can now decide to get rid of witnesses if you feel you are becoming too notorious after a not-so-stealthy assassination, or help thieves pursued by guards. These tasks are optional but will bring you interesting rewards if you accept to fulfil them.



What prompted the move in setting for the story of the game from the Middle East to Europe? You try and touch on contentious issues in this series, too – is that ever a problem for a mass-market entertainment company like Ubisoft?
When we created the *Assassin's Creed* franchise, we knew we wanted to talk about pivotal periods in history. Moments where everything changes that define the world in which we live. That is exactly the case for the Third Crusade: this period defined the balance of power between Civilization and Religion for the centuries to come.

So when we started *Assassin's Creed II*, we asked ourselves the same question. What is an even more exciting defining moment in history? The answer was pretty easy to find: in a few years and in a very precise place, a handful of geniuses radically changed *everything*; they invented a modern vision of the world, where men were at the centre rather than God. They invented a new way of representing the world with the invention of perspective, they changed politics, architecture, created the art of modern war and diplomacy – they even invented the banking system as we know it! One man even invented planes, helicopter and tanks! Those men were Machiavelli, Leonardo Da Vinci and the Medici to name a few. The place is Italy. The time is the end of the 15th century and it is called Renaissance, literally a Rebirth.

> ***"We invested most of the development time in ensuring that there is a huge amount of variety and depth in the missions required to finish the story."***

This is history as we learn it. But those were also cruel times, ruled by war, treason and murder. Of course we found it very interesting to depict this darker side of the Renaissance in an *Assassin's Creed* game and cast a new light on those astonishing events.

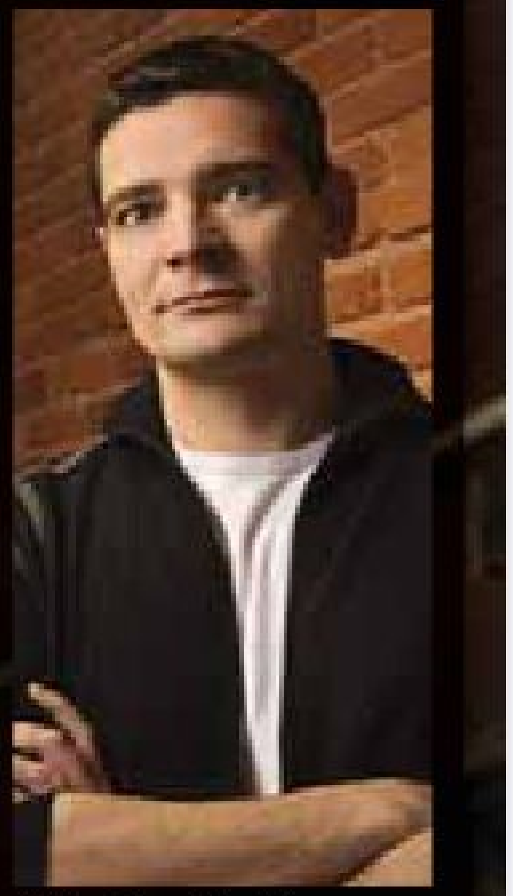
For now – based on the feedback that we have from our fans on forums, Facebook, conventions – everyone is extremely positive about the setting.

Have there been any changes to the core dynamics around character movement and exploration that were such a key part of the design for the first game?
For *Assassin's Creed II*, we are keeping the core dynamic that made the first *Assassin's Creed* such a great experience.

We are building and adapting on the character physics and animation we created for Altair while taking in mind our new setting and new character. For example, since Venice has higher buildings than Jerusalem – some have up to six floors – we decided that our character needed faster free-running skills. Therefore, lead character Ezio can now climb and run faster across rooftops. Of course we will keep and improve on all those elements with even more gorgeous city landscapes, more animations, a new and even more exciting historical setting, more ways to interact with the crowd.

But our main focus is to bring diversity and depth to the gameplay: more variety in missions and objectives, more weapons, more diverse assassinations and a deep character progression. For example, there is much more exploration in *Assassin's Creed II* and exploration will bring more reward. This time, we have secret locations to find in the various environments. The Secret Locations are interiors of several famous landmarks. You can discover their entrance in various regions of the game. The gameplay in these locations will challenge the player in acrobatics, puzzles and stealth. These locations are not bound to the main quest but offer hours of additional gameplay, details about the story of the assassins versus templars war, and a special reward as players complete each of them. All these elements make the experience evolve throughout the game. We really want *Assassin's Creed II* to be unpredictable and have the player wonder after each main assassination: 'and now, what's next?'

Turn over to find out how Ubisoft is also using Assassin's Creed II to boost its investment in technology – and giving 'credibility' to its game via an expansion into making movies.



Sébastien Puel is producer of Assassin's Creed II

TECHNICAL FEAT

UBISOFT MONTREAL HAS moved closer to that rare thing: an internally developed, cross-game, cross-platform engine that supports a variety of projects.

Called the Anvil engine, this technology was created alongside the first *Assassin's Creed*, with the ambitious game made in tandem with an ambitious codebase.

"The mandate of the team was to create the next-gen action/adventure game so they had to build an engine up to the test," says producer Sébastien Puel.

"For *Assassin's Creed II* what I'm particularly proud of is the new game architecture allowing much more diverse gameplay and missions in our engine. We have enhanced NPC navigation showcasing parkour-like acrobatics that will spice up the chases and escape missions in the game."

Significant advancement has been made in making the engine offer more graphical oomph, he says.

These include a night and day cycle; new load distance for more detailed open-world environment from greater distances; several rendering improvements to support improved lighting, reflection and more special effects; and a bew cloth system used extensively for characters.

Says Puel: "Beyond the technical achievements, the very location we chose poised us to make a visually outstanding game. Cities like Florence and Venice are amongst the most stunning landscapes in the world and all the technology we developed just served this purpose, made you feel this beauty. We are not only recreating the architecture but also everything that makes Italy so unique during the 15th Century – from the special lighting of Venice to the colourful carnival."

> ***"The Anvil engine's new features include better load distance for more detailed environments and several rendering improvements."***

And because Ubisoft Montreal is also home to the team responsible for the *Far Cry* franchise (plus many others), the engine has also incorporated the same internal vegetation technology used in *Far Cry 2*. It's proof positive that the shared engine can work across teams, with incremental features from each of Ubisoft Montreal's tent pole release folded back into upcoming titles.

"We constantly share knowledge between teams and projects," says Puel. "Since *Far Cry 2* came out last year, the team on that game shared their software 'real tree' – it is included in Anvil for *Assassin's Creed II*. This is only one example of shared knowledge between teams."

LIGHTS, CAMERA, ASSASSIN

As if having to manage hundreds of staff wasn't enough, the Assassin's Creed team is also spearheading Ubisoft's move into movie-making. The Montreal studio and sister company Hybride – a nearby special effects house acquired last year – are now working together on a series of short Assassin's Creed: Lineage films. Its production alongside Assassin's Creed II is having direct ramifications on the game's development, says producer **Sébastien Puel**…

Above: Real meat-suit actors (or 'humans') are being filmed for the Assassin's Creed movies – with 3D environment assets from the games dropped in later

How much crossover has there been between the production of these mini-movies and the game development team?
We've shared all the preparation and research work done by the dev team during conception to create costumes, weapons, props – all historically accurate and common between the game and the short films.

Historians did research, then concept artists from the game team made illustrations of each costume, then a costume maker from the film team made the real costumes and then those influenced the final 3D models in the game.

Another good example of collaboration is the common casting of our main characters. The same actor was cast in both the film and game so that we can work with actors to help evolve the characters.

We're going a step further than just photographic likeness. We've recorded the actor's voice and mo-capped them for the game's narrative sequences. This process really helps give more life and credibility to our in-game characters.

This collaborative process involved people from a lot of different backgrounds; all of the virtual items like clothes, props and weapons now have a real life replica.

What staff, resources and assets are you able to share?
The writer for *Assassin's Creed II*, Corey May, worked closely with the *AC: Lineage* scriptwriter, William Raymond, in order to make sure both stories were linked and stayed true to the original story.

Also, the 3D game environments were exported from the Anvil game engine and then imported in XSI by a completely new process developed by Ubisoft in conjunction with Hybride. 50 per cent of these environments were partially re-used and re-worked on the texture and geometrical levels and then exported for use in the film.

As live actors were filmed on green screen they were then integrated inside the virtual set extracted from the game environments. The game sets are then enhanced for a better integration with live actors.

To a certain extent, it's similar to the technique used in *300* and *Sin City* on which Hybride has collaborated.

> ***"This collaborative process involved people from a lot of different backgrounds. The crossover really helps add credibility to the game."***

The film's weapon designer worked with the game's art director to iterate on our weapon design, once we saw working versions of the hidden blade and others we were able to adjust each animation to make sure it reflected the actual weight and function. This process really helps give more life and credibility to our in-game characters.

What resources can't you share?
One obvious thing we were not able to share was the motion capture, seeing that *AC: Lineage* is a live action film. Also the in game-characters could not all be used in the film series as the *AC: Lineage* storyline explores the events that happen just before the *Assassin's Creed II* game starts, revolving around Ezio's father, Giovanni Auditore da Firenze. Finally, the music used in the film series was by George Clinton, not Jesper Kid who created the music for *Assassin's Creed II.*

How can you see these two fields overlapping or informing each other as time goes on?
Ubisoft believes that there is a lot for us to learn by working with the movie industry.

On one side there is the convergence of the content but on the other side, there is also the convergence of the tools and technologies.

We are finding out that there are a lot of similarities in the way we work and the way the VFX and movie artists do work. We are often working with the same tools, but in different ways. We are convinced that we have to learn from them as much as they have to learn from us.

The movie industry is now over a century old, the games industry is around 30 years old. If there's one area where we have some steps to make, it's in the way we are telling our stories. The likes of Spielberg, Cameron and Jackson have a lot to teach us in that field, because our industry isn't at the point it should be when comes the time to tell a good story, or to transmit emotions.

The beauty of mixing two different universes such as cinema and video game is that by sharing expertise both spheres grow and improve one another.

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Conference: 5:00pm – 8:00pm
Networking and dinner:
8:00pm – Midnight

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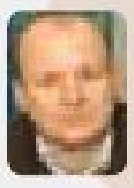
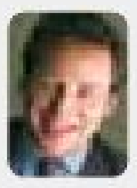
Programme

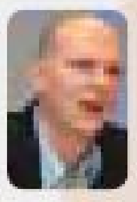


5:00pm
Welcome to London Games Conference Stuart Dinsey – *MD, Intent Media*



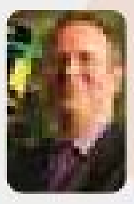
5:05pm
Opening Address Ed Vaizey – *Shadow Minister for Culture*
The man who may well be the games industry's next voice in government talks directly to the market

5:10pm
The Future of Digital Distribution
Nick Parker – *Parker Consulting*
One of the games market's most respected analysts outlines the current digital distribution landscape and offers up exclusive pointers to the future of the sector



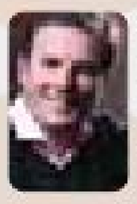
5:35pm
Daddy, What's a Disc?
A discussion on the death of physical media and the business models that will rise up to replace them
Chairman: Phil Harrison – *Former president of SCE Worldwide Studios*
Panelists: Kristian Segerstrale – *CEO and Co-Founder, Playfish*
Mark Gerhard – *CEO, Jagex*
Thomas Bidaux – *CEO, ICO Partners*

Coffee



6:30pm
The New Food Chain
Games will still be made, sold and distributed. But not like they have been. This session looks at the new lines of demarcation.
Chairman: Andy Payne, ELSPA
Panellists: Charles Cecil – *CEO, Revolution Software*
Rich Keen – *Marketing Director, Direct2Drive*
Nick Pili – *Network Director, SEGA*
Gian Luzio – *Product Director, The Hut*

7:00pm
Charting the Progress of PC Downloads
Dorian Bloch – *GfK-ChartTrack*
The man behind the games industry's charts (and holder of vast amounts of sales data) explains how digital distribution is the future of the PC market – and makes a forceful case for a download chart



7:20pm
Outside the Box
Key figures from the market's three established format holders discuss their roles in the brave new digital future
Chairman: Tony Mott, *Edge*
Panellists: Pete Edwards – Director, *PlayStation Home, SCE*
Neil Thompson – *Head of Xbox, UK & Ireland, Microsoft*
TBA – *Senior Nintendo Exec*

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Ready to WARE

Nintendo has managed to convince hundreds of developers from all over the world to make games for WiiWare and DSiWare. But in the age of the iPhone what else needs to be done to increase studios' chances of success on the platforms? **Will Freeman** speaks to Nintendo's Laurent Fischer to find out…

Nintendo Europe's senior marketing director, Laurent Fischer

Uptake for WiiWare and DSiWare has been strong, with a mix of developers on the channel. What has been key to making that happen?
The reason we made the platform is, quite simply, to help people create great games for our consoles. You must make it as easy as possible for developers. When we meet publishers, studios and game creators, they are all passionate people with a love for video games and lots of ideas. Making those games a reality is a long journey, from the concept idea to the playable software.

That considered, when we were designing the WiiWare platform, the key area for us was an entry point with a very open door, and a real way for developers to take their concept through there. It is made to work like that, and we're happy that it is working as we wished. Actually, if we were ever not able to keep that wish, all the work we did to allow games makers to reach us would have been wasted. In other words, the low barrier for entry is the absolute priority for us.

And yet it's arguable the iPhone, with its freely available SDK, has a lower barrier to entry, and you don't yet offer anything like XBLA's indie games channel. Would you say it's still easy for smaller teams and students to get games on WiiWare and DSiWare?
There are a lot of opportunities to develop for us. We are in a very dynamic area, where we are always considering how to improve the system for developers. We are constantly looking very carefully at it.

Already, we have many different people making these games for us. Developers with such varied profiles. We have veteran developers who have been creating games for many years, but we also have a student team making a game for us, which started as an end of year exercise. Something done at school is becoming a game.

Key to any distribution platform is its userbase. While the Wii is a big success, what is Nintendo doing to make sure Wii and DSi owners understand and use the WiiWare and DSiWare services?
Attracting people to use our services is a long process. The first barrier is the natural technical barrier of connecting your Wii to your internet service. Now, those of us who have been through that process know it is not so complex. Lots of people don't know that, or don't think about it and some people try and just don't manage it.

The first thing you have to do to attract people to a service like this is provide a large amount of appealing content, to motivate them. The developers making the games for this platform are the ones providing a good reason for people to connect.

> ***"We have so many people making games for us. Developers with such varied profiles. Veteran developers who have been creating games for many years, but also a student team is making a game for us."***

The second thing we have done is create the new 'Ambassador' scheme, where our customers are rewarded with points and games for connecting their friends' Wiis to WiiWare. The point of this is that if you have a technical barrier, but you also have willing people in the community who know how to connect the Wii, then with an initiative like this you can help overcome the technical barrier in the long-run. Really, we want to reward our audience for helping attract their friends and family. It works with this community mood that we have, and people enjoy what the Wii can offer.

Who is the intended audience for WiiWare and DSiWare? Is it Nintendo's family and casual demographic?
The key challenge for Nintendo is to make sure everybody has both a good opportunity and a good reason to go to WiiWare or DSiWare. Basically, our customers have so many different profiles and tastes. Even with Virtual Console we have both older retro gamers and newcomers who are looking into the history of modern games like the more recent *Mario* or *Zelda* releases.

We try to offer a selection that provides an information flow and experience gathering between all of our gamers.

Some developers have criticised the rigid nature of the WiiWare release structure. How much say do developers have? Is it something you plan to make more flexible?
At the end of the day, this is a very complex issue. The thing is that the time from when a game is finished, tested, and ready to play and the point when we are ready to publish it can be very short – usually one or two weeks.

With all the developers and people working on this, everyone has their own agenda. We don't want to say 'your game is ready, but you have to wait six months for a better slot'. We don't set such barriers, and in most cases the rule is that if your game is ready, and you would like to have it published as soon as possible, it's fine. We are not the one to prevent people from working to their own agenda.

However, sometimes we do have a very packed week, with three or four games going in the same direction, and then we sometimes have two weeks with not so many games, or some very different games, so we have to be careful with conflicts.

In general though, when a game is ready it is published without much time elapsing. And really, with physical software where you have to actually produce, package and deliver to stores, it can take weeks or months.

With WiiWare and DSiWare, if it is ready, it can be published very fast. We try as much as possible to give the developers the release dates they want.

With XBLA and iPhone and PSP Minis, obviously developers are now faced with a huge choice of download platforms. Why should they choose Nintendo over Apple, Microsoft and Sony?

I think the best developer entry point is the unique nature of our platforms. The DSi and the Wii are very unique in terms of enabling people to create games with completely new concepts.

With that entry point, and the open door, it makes sense for a developer with an idea no one else has had to come to us, with our unique control systems. That's the DNA we have, and it brings us great games.

Of course, some concepts we have could work perfectly well on other formats and platforms, but that's fine. As long as we let them realise their dream, and let them turn an idea into a final game, that is what matters the most.

Do you think that having two unique control systems has prevented Apple from stealing away the attentions of possible new developers?

I think we have a mutual goal that is to make sure we can always drive people to play – both people who already play and people who never have.

As long as people find a way to access what we consider to be great fun, then that is what counts. We are confident that having these unique systems makes for a very strong case for people to be interested in playing releases for our platforms.

Does that mean all these new teams are only focusing on digital downloads from now on? Are they forgetting about retail?

There are two ways that WiiWare and DSiWare offer benefits to retail of physical goods. The first is having more people being able to play games. We know from all our experience that what people enjoy on the services makes their appetites for playing games far bigger. That's the first benefit to retail.

The other way is that WiiWare is a laboratory. What we know is that some of the games that are – you could say 'tested' through this platform – they may one day get access to the normal retail channels. That's because the developers have managed to polish their software through the WiiWare experience. That is going to provide sales.

Again, our core business is in the retail, and our other download services are complementary. They just provide something that can't exist alone in the retail system.

www.wiiware.co.uk

Turn over for a profile of key WiiWare release Lost Winds: Winter of the Melodias

LENDING A HELPING HAND

Developers of all sizes are working on a diverse range of downloadable games for Wii and DSi...

REFLECTIONS

"Our game couldn't have been done on any other platform. DSiWare was perfect for a student project, and it's amazing that we're now working with Konami, which is publishing it. The gameplay could only work on the DS, thanks to its unique set-up, and the service DSiWare offers is perfect for giving a game like ours a chance to make it to the public. There are so many risks with retail. Even given the support for a retail release, I don't think we could have done it, and as a download, the DS is the only system on which our concept would work."

Hersh Choksi

BIT.TRIP SERIES

"WiiWare offers developers creative freedom. Working with Nintendo, in my experience, is a very nice process. It is very open to wild concepts and out-there ideas. It's pretty simple really, to become a licensed WiiWare or DSiWare developer. I think it's great for independents, and it all comes down to Nintendo's mentality – it wants unique things for its platform. Nintendo's technical support, in terms of libraries and SDKs, is also really great. The tools that came from Nintendo helped us get up and running very fast and get to release without a headache."

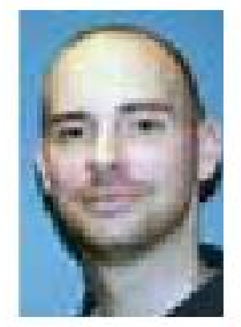
Alex Neuse, CEO and designer, Gaijin Games

SUPER MEAT BOY

"The Wii install base is so huge and to have a console with a market that is so open-minded to creative games is perfect for the old-school 'Nintendoishness' of our game *Super Meat Boy*. WiiWare was a perfect fit. Nintendo has been so supportive, and lets us do pretty much anything we want, when making the game, and in the way we've promoted it with our own comics. Nintendo has been very, very helpful."

Tommy Refenes, co-CEO, Team Meat

COMBAT OF GIANTS: DRAGONS



"The 40MB limit of these games wasn't a challenge for us. As a game designer, on any console, you always want to do so much, but it's always finite; there's always a limit. DSiWare was just the same old challenge. We certainly didn't feel too limited. We reduced the size a little, but never had to compromise quality. You know, you could say the Xbox 360 isn't big enough. There's always a limit. Being able to take a DS and DSi series onto DSiWare let us broaden our audience more. We hope we can tempt the audience that hasn't committed to buying the full game. Maybe it will inspire them to invest in a physical copy."

Wesley Pincombe, game designer, Ubisoft Quebec City Studio

CAVE STORY AND NIGHT SKY

"All three current consoles are great, but the developer support from Nintendo has been just amazing. It has provided us with so much. If any other independent developers were to ask us about working with WiiWare or Nintendo, I'd really only have good things to say. I promise I'm trying to think of something negative to say, but I just can't. It's hard work, but Nintendo makes it a hell of a lot easier."

Tyrone Rodriguez, Nicalis

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Supermassive Games are an independent games development studio based in Guildford in the South East of England. Having just celebrated their first anniversary, they have already grown to 50+ people working on multiple PS3 products.

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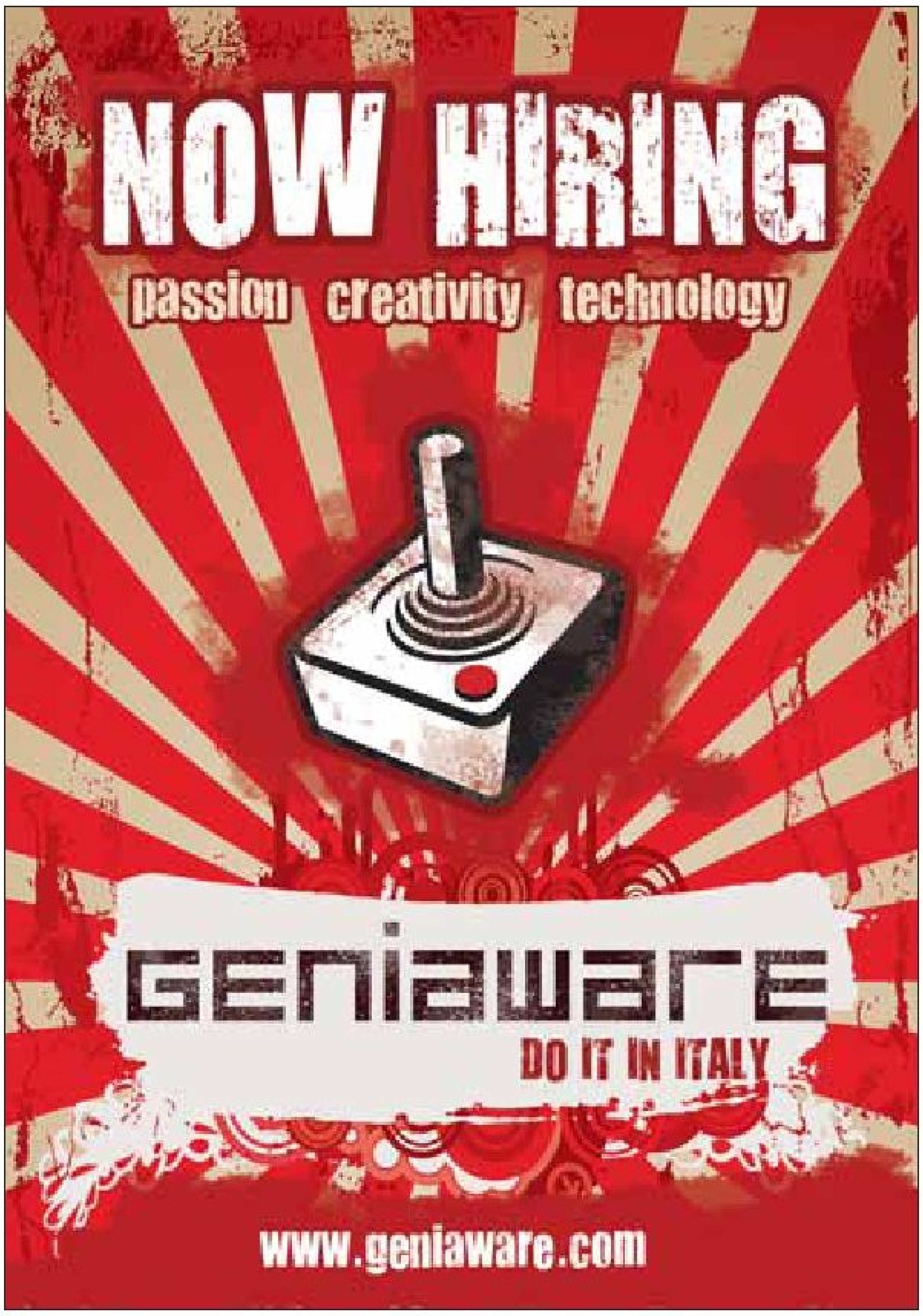

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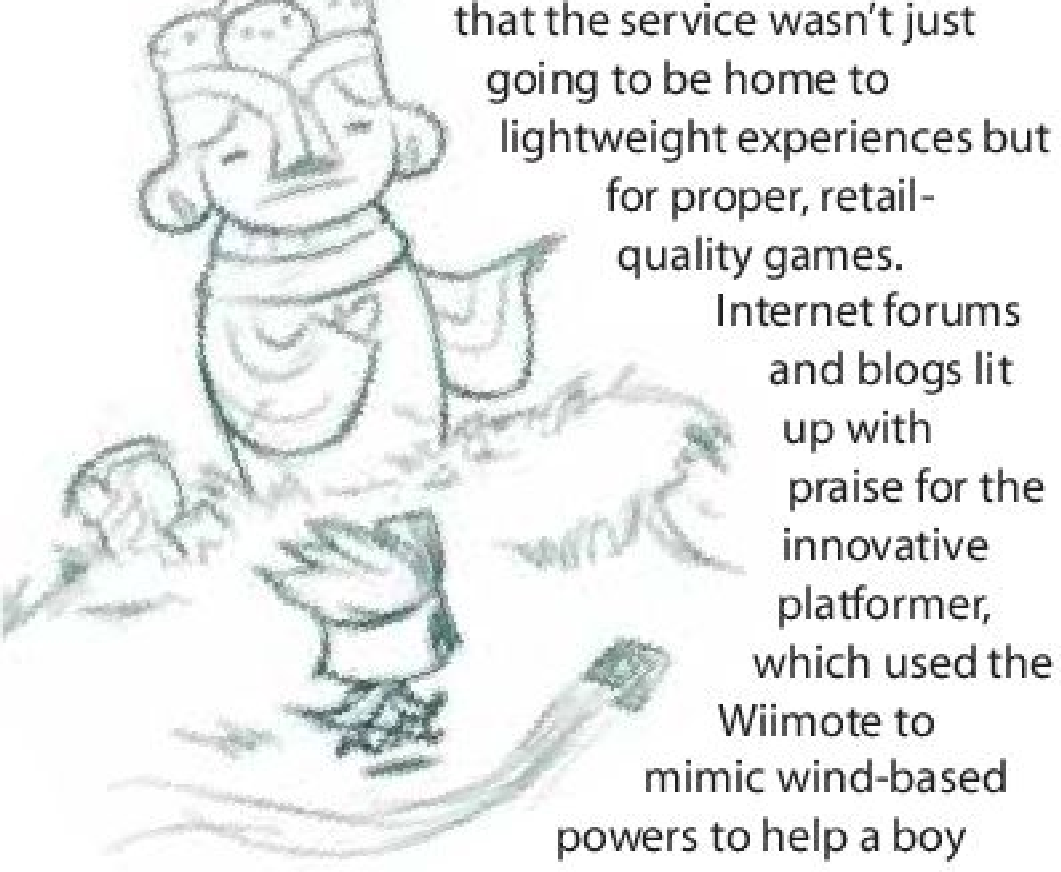
AardvarkSwift

Winds of Change

The once-unlikely jewel in the WiiWare launch crown is back for round two – but what's taken them so long? **Ed Fear** visits Frontier Developments to find out more about how those LostWinds came to blow again…

If you had asked people two years ago what they thought the star of the WiiWare launch line-up would be – or, more pertinently, who would be behind it – not many would have plumped for Frontier Developments and its *LostWinds* game.

It was the Cambridge-based group that, alongside Square Enix, provided real weight to the line-up. Both brands managed to prove on day one that the service wasn't just going to be home to lightweight experiences but for proper, retail-quality games. Internet forums and blogs lit up with praise for the innovative platformer, which used the Wiimote to mimic wind-based powers to help a boy explore the world. It even picked up a Develop Award last year, beating *Heavenly Sword, Crysis* and *Overlord* to win the Best New IP category.



Those enamoured with *LostWinds* might have expected that with the short, digitally-distributed nature of the game, the sequel – mentioned on the Frontier website before the first game was even released, but not officially announced until last month – may have not been too long coming.

> ***To be a developer these days you have to plan very well. We can't presume everything's going to be a success. That doesn't mean we don't believe in it.***

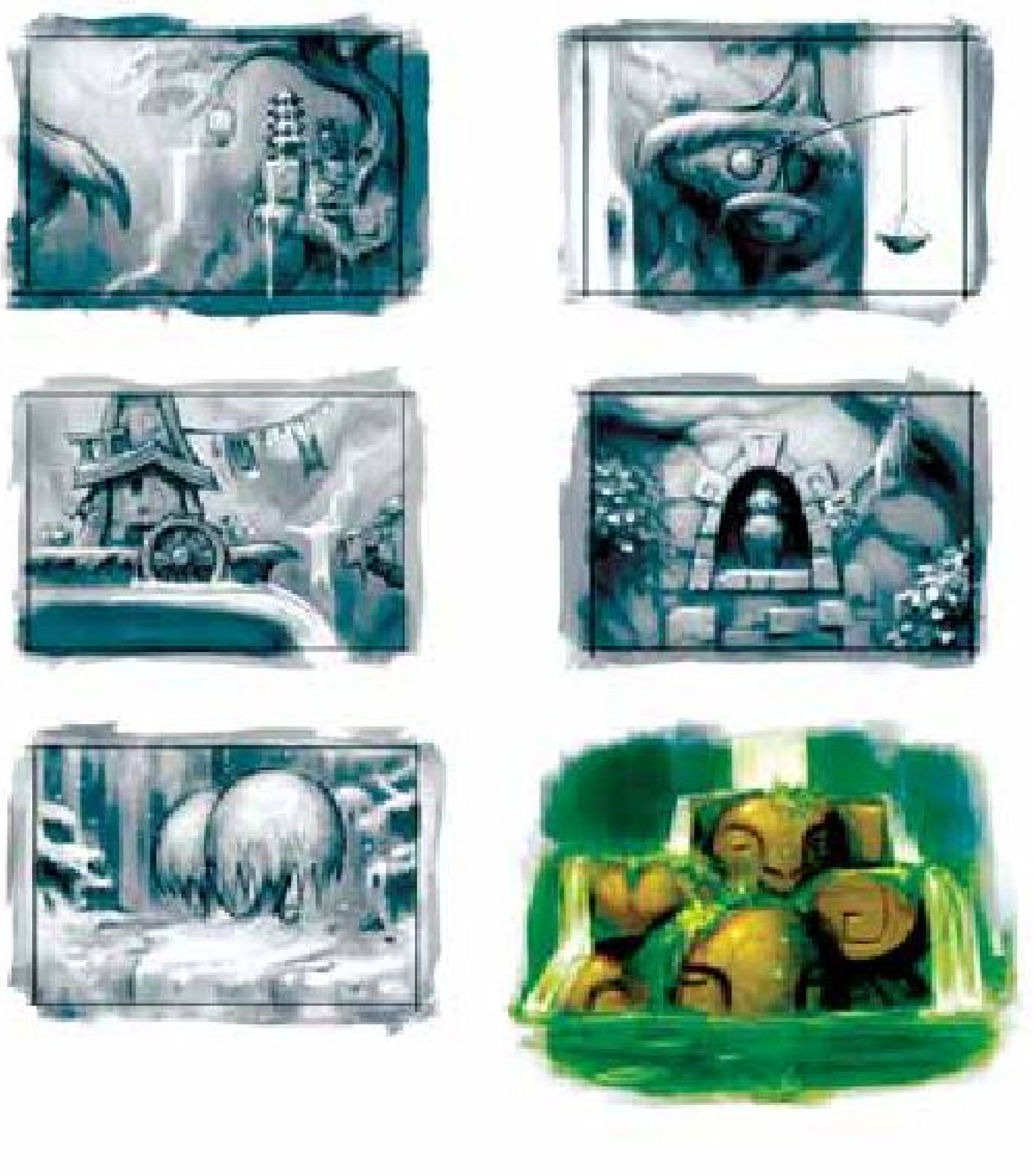
GAME LAUNCH

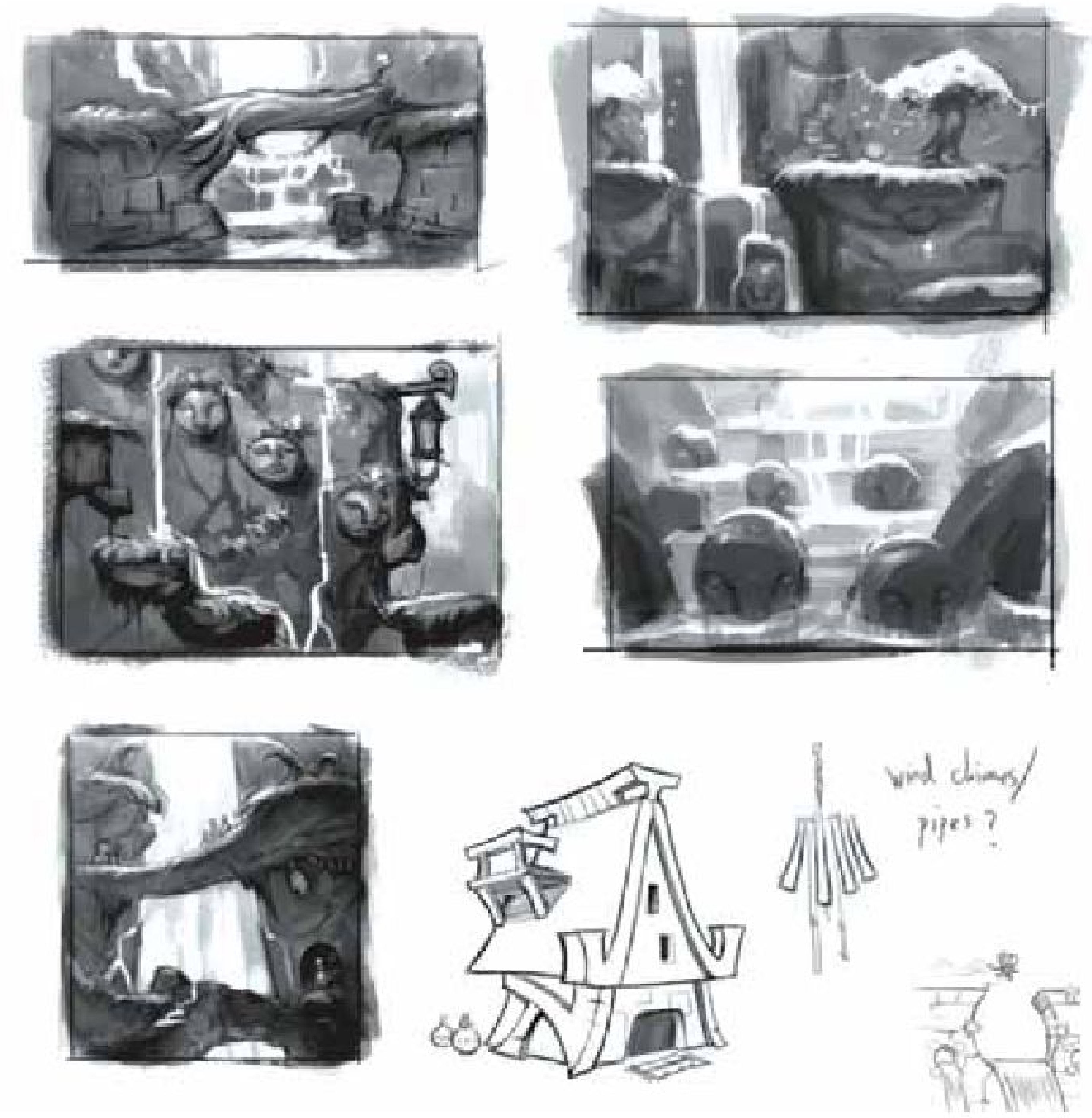
As the team readies for the launch of the sequel, *LostWinds: Winter of the Melodias*, it's perilously close to 18 months since the first episode was released. With radio silence surrounding the game until as late as last month, and the still uncertain penetration rate of the WiiWare platform among the userbase at large, some had assumed that the sequel might be going for a bigger-scale, perhaps even retail, release.

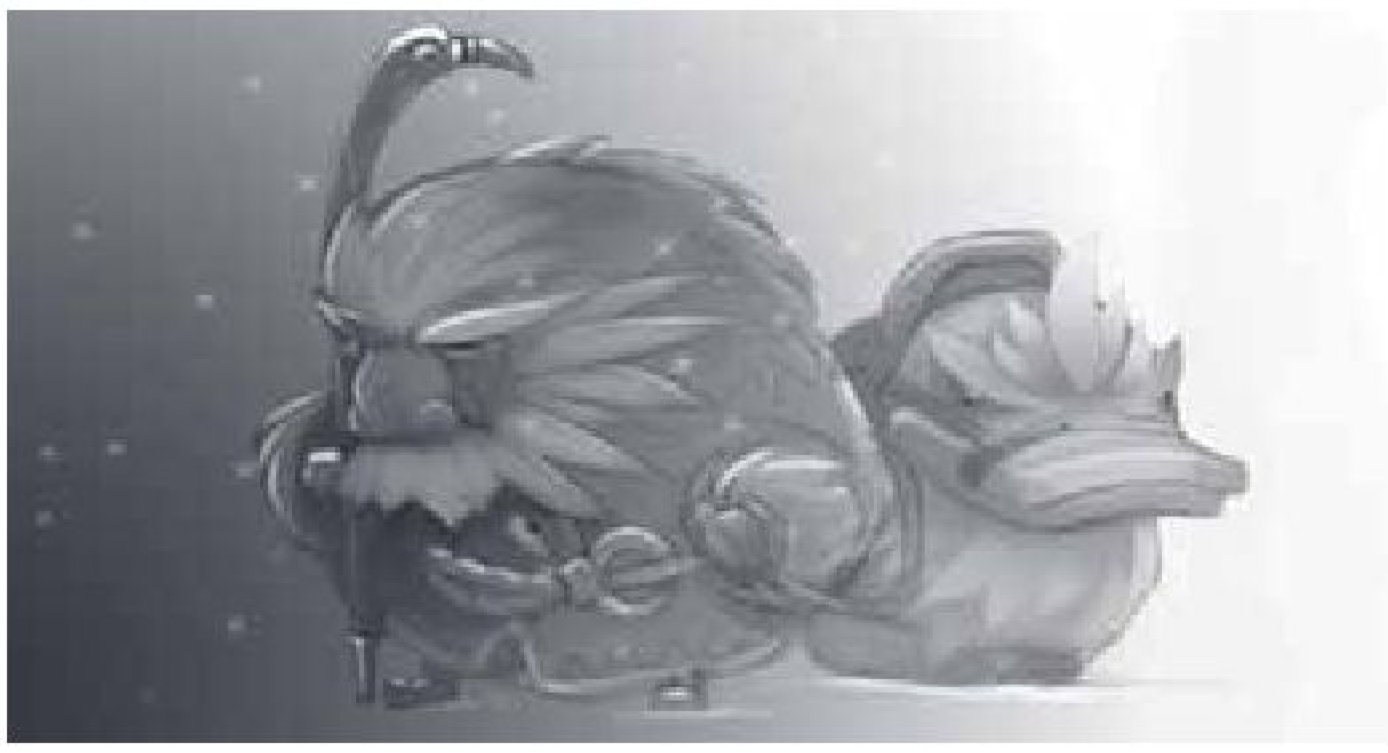
Not so, but then the game hasn't really been in development all that long – in fact, the team wasn't properly together until April of this year.

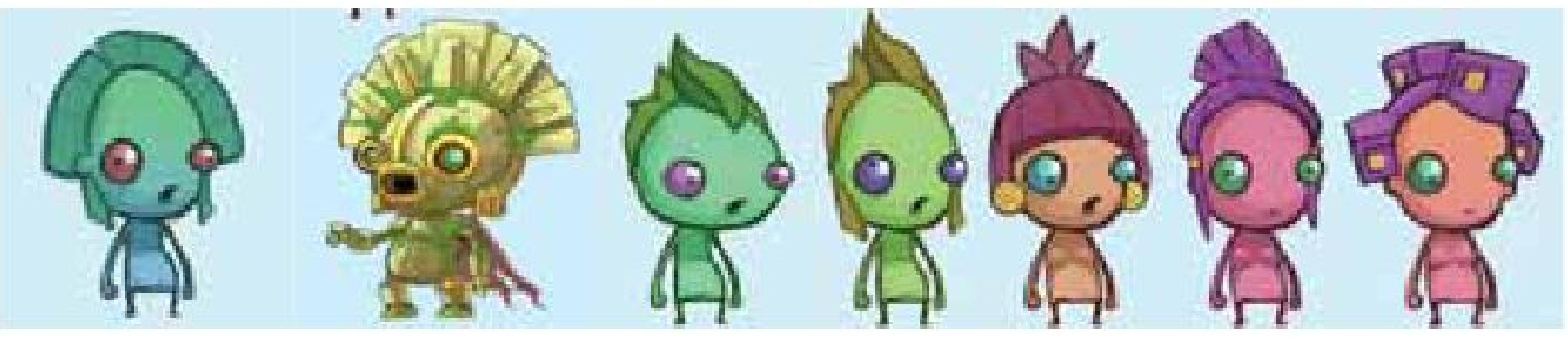
"We haven't been working on this full-time in the interim," explains David Walsh, Frontier's managing director. "We had other commitments that we had to deal with first, but we've been thinking about what we could do ever since we finished the first game."

One of the many villagers whom main character Toku must help









LostWinds: Winter of the Melodias enables players to switch between seasons, assisting characters with various puzzles and tasks

Other commitments? "Well, another way of thinking of it is that to be a developer these days you really have to plan very well," interjects David Braben, founder of Frontier. "We can't presume everything is going to be a success. That doesn't mean we didn't believe in it – quite the opposite – but you can't assume these things.

"It really is more a planning thing than anything. On the one hand, it would have been great to roll straight over and do a sequel, but then it's very easy to fall into the trap of becoming a production machine. It's not clear either way."

"The other benefit," says Braben, "is that it helps not only keep things fresh in terms of the game, but also the experience for the team themselves. I don't want to imply that *LostWinds* is some kind of hobby, but there's a parallel – when you do something as a hobby it's the contrast to what you do the rest of the time that makes it really different and refreshing. It has given us the chance to have that freedom to experiment and do 'playful' stuff, and that's really exciting for us."

Nevertheless, Walsh is clear that, if they can avoid it, 'other commitments' won't be splitting the group up again for the foreseeable future: "I think it's safe to say that the team will be kept together going forward," he asserts.

> **"*Digital distribution has forced Frontier to become more mature in the way it approaches development. We maintained the discipline to get things done when we say they're to be done.*"**

DIGITAL DISTRIBUTION

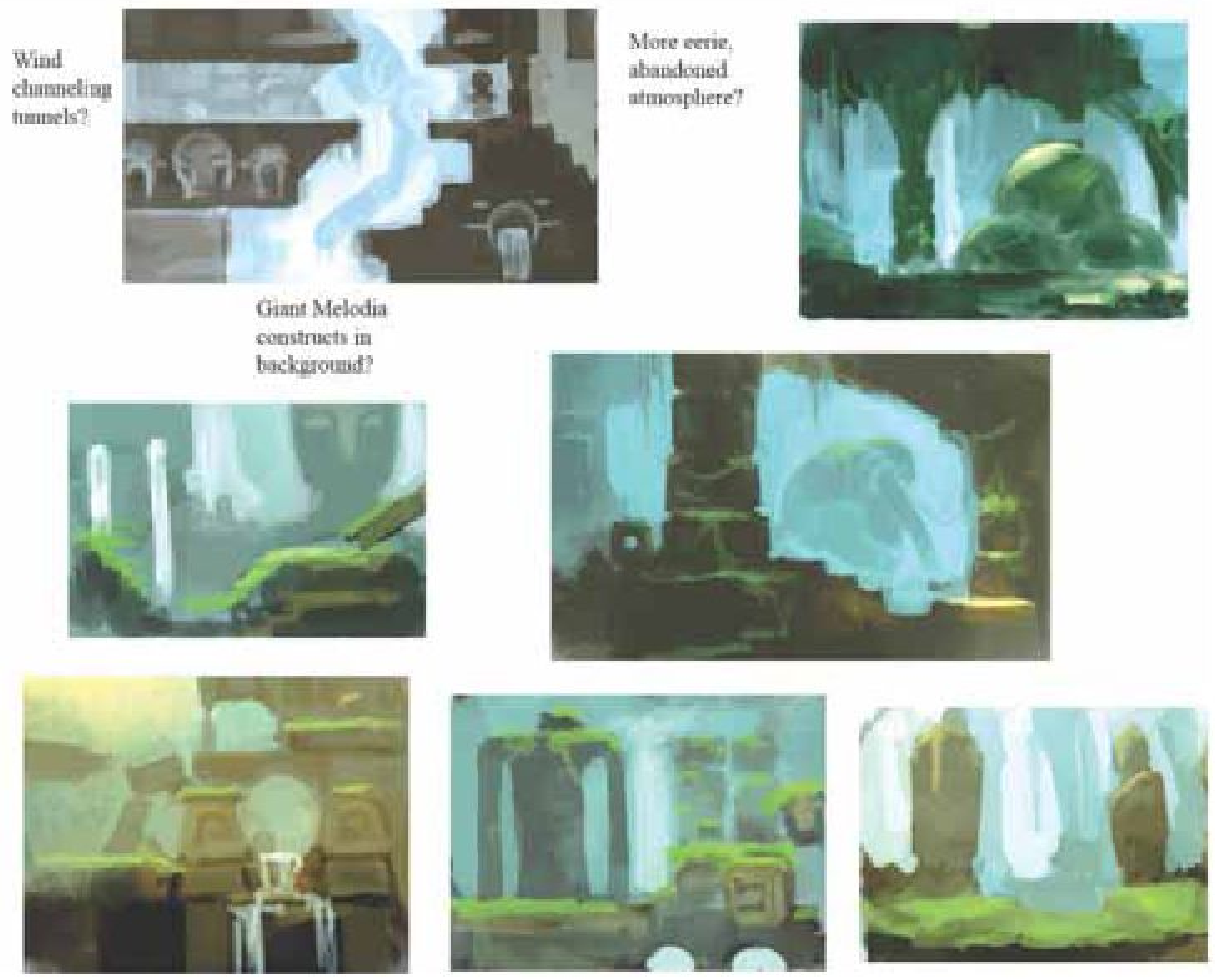
Clearly, we put forward, the fact that the sequel is also coming to WiiWare means that the platform served Frontier well enough. "It worked very well for us," says Braben. "It was a good experience all round, and it was nice to be there at the start of the service. We have an interesting challenge now, given that it is a much noisier market. We are really excited about it, and we have a lot of love for it in-house too. So we are very hopeful that it can shout loud enoh to be heard.

"It's very interesting how the emphasis is gradually changing to digital downloads. I mean, look at what Microsoft is doing by splitting *Fable 2* into downloadable chunks. It's interesting, from a psychological point of view, seeing how subtly the centre of gravity changes slowly month-on-month, year-on-year."

But the move to digital distribution and self-publishing has forced Frontier to become more mature in the way it approaches development, Walsh interjects: "I don't think we've ever doubted the input of the publisher-type functions. The question was whether we could do that ourselves, and I think we've maintained the discipline to get things done when we say they're going to be done, and to take a step back and be critical of ourselves."

Nevertheless, the company remains a strong supporter of the digital download space. It hasn't yet produced any products for Xbox Live Arcade and PSN, but that might be down to the firm's strong belief that these smaller games shouldn't be given any less effort than a full retail project – and that they should be undertaken not to make a quick buck, but to experiment with fresh concepts.

"We've seen some nice things coming through on the three digital download platforms, and we think that's a positive thing, and we want to back that as much as we can," says Braben.

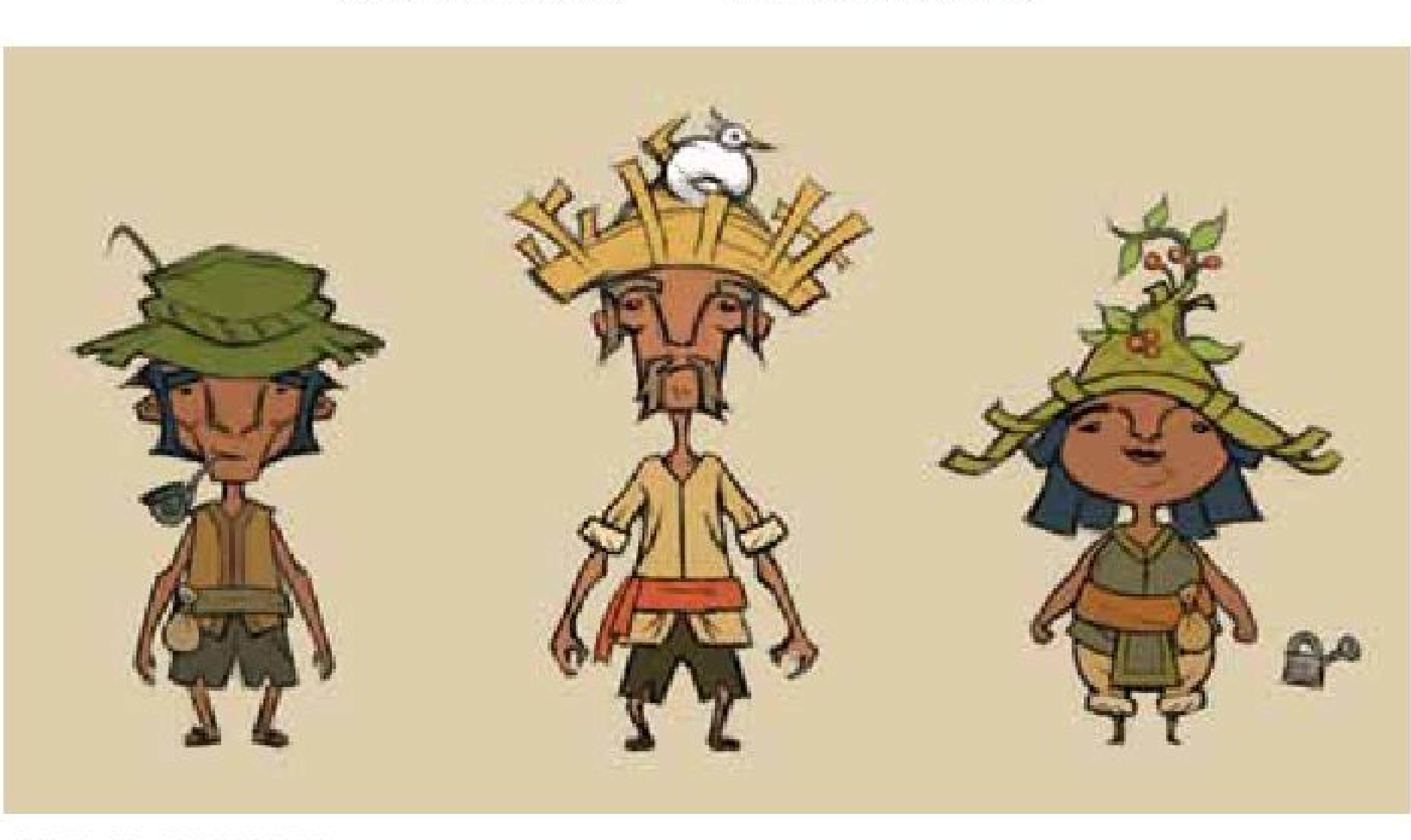


Wind channeling tunnels?
More eerie, abandoned atmosphere?
Giant Melodia constructs in background?

"But one of the things that really annoys me is when people see XBLA, PSN and WiiWare as a dumping ground, in terms of 'you don't need to put the same amount of effort in'. Actually, it's quite the opposite. It's like how novelists approach short stories. It's a way to try out a radical idea, and quite often a lot of those do become novels later on. What I don't like is the idea that people can scratch one out at the bus stop, which I've overheard at conferences."

There's little doubting that dedication. Few who have played *LostWinds* – and, indeed, few of those that will go on to play the sequel – would say that the game has any less polish or ambition than most companies put into traditional retail product. A team of under 20 that can complete a game of this quality in just over six months and feel like they're creatively empowered in the process, paints a rosy future for the increasing numbers of disillusioned cogs whirring away in gargantuan machines across the world. That they can do this and still come away with an award-winning series, is testament to this team in particular.

www.frontier.co.uk



THAT DIFFICULT SECOND GAME

OF COURSE, FRONTIER ARE more interested in talking about the game rather than what's brought them to it. *LostWinds: Winter of the Melodias* picks up almost straight after its predecessor. When the diary of protagonist Toku's missing mother is found, the only reference to her whereabouts points to the city of Melodia, high up on the mountains, where Toku must travel to in search of her whereabouts. On the way, though, he comes across Summer Falls – an idyllic setting mysteriously locked in an eternal winter.

It's here that the new mechanic for the sequel comes into play: the ability to switch seasons. "As we were finishing up *LostWinds* we were thinking of things we could do for the next game, and someone came up with the idea of creating snowballs using the vortex ability," explains lead designer Steve Burgess. "So we took one of our old levels and made a winter version of it, and it looked great, so we thought we could do winter as our big visual difference. But then we realised we could do both – keep the visual style of the last game through the summer levels, but then make them play completely differently in winter."

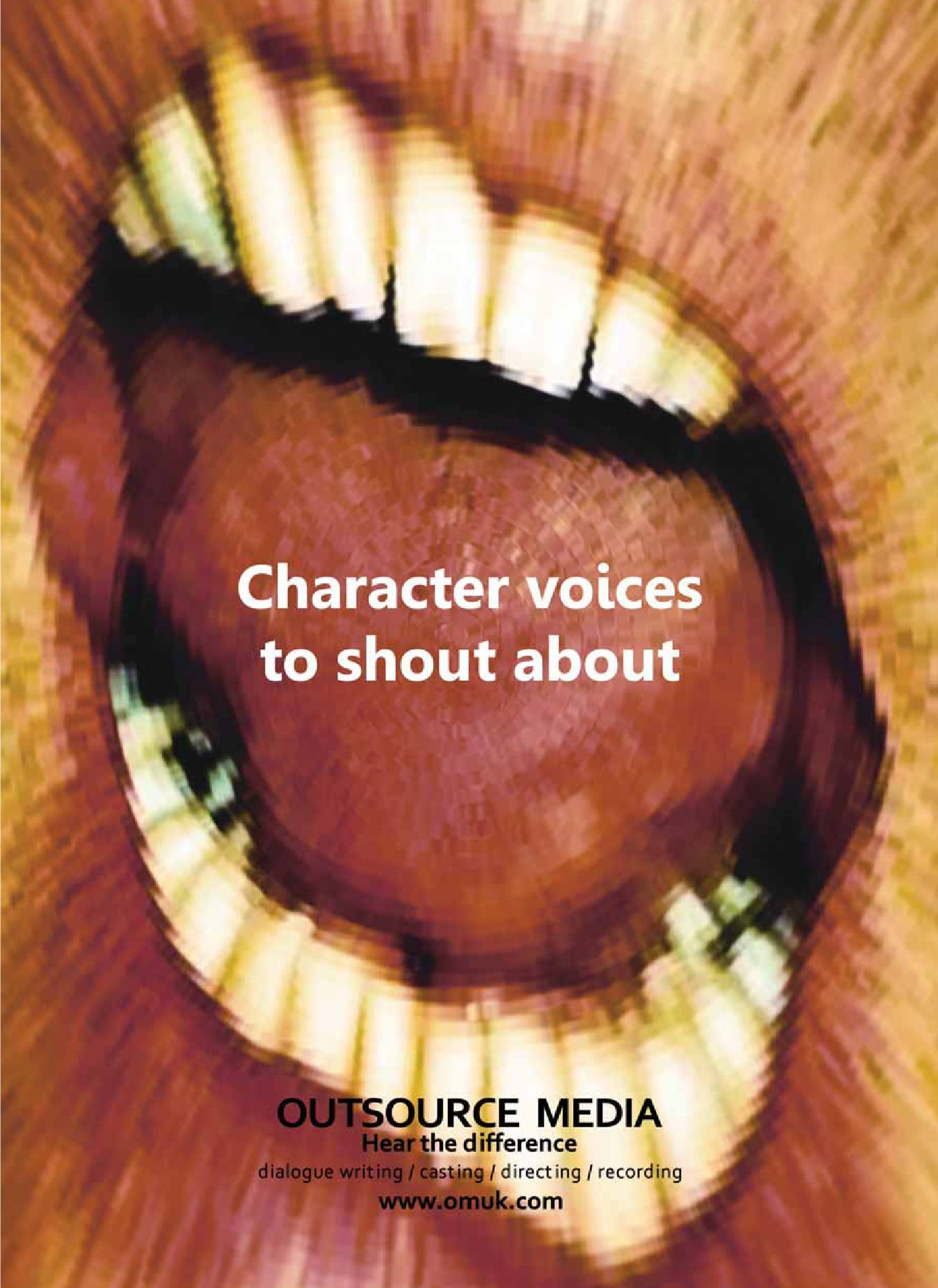
Such a design progression is quite common for the series, Burgess says – after all, the original concept emerged as part of Frontier's 'Game of the Week' idea-athon, where it was ripped apart by various staff members until they knew it could stand on its own. "Each day, someone sees something and goes 'Ah, wouldn't this be cool,' and then we'll try and work it in," Burgess laughs. "A lot of the design has been very natural, very organic."

The season-switching ability both significantly expands the effects of the last game's power set, and opens up possibilities for some truly ingenious puzzles (some of the solutions we're shown are so simultaneously imaginitive and intuitive that we actually laugh, cynical and world-weary that we are).

When visiting Frontier, *Develop* was treated to a full run-down of the storyline – which we've curtailed here to avoid spoiling anything – and it is genuinely surprising how thickly the plot is layered. "It's definitely a lot more involved than the story in the original," confirms Burgess. "There are lots of threads that all work together. Each of the characters have their own motivations within the bigger arc of the game's story, and these threads cross over at points. We've overthought a lot of it, really – we've come up with the backstories and reasons behind all of these things, and a lot of it won't be seen."

The team has also listened to the criticisms levelled at the original game: firstly that it was too short, and secondly that it could at times be difficult to work out what to do next.

Braben confirms that, in addition to focusing on making the environments much bigger this time around – wonderfully demonstrated by a particular set-piece weaved into the game's opening section – there are also more areas than in the original. They're all linked via a map, which gives not only a spatial context to the discrete areas, but also gives players a rough idea of where they should be going without taking the exploration out of it.



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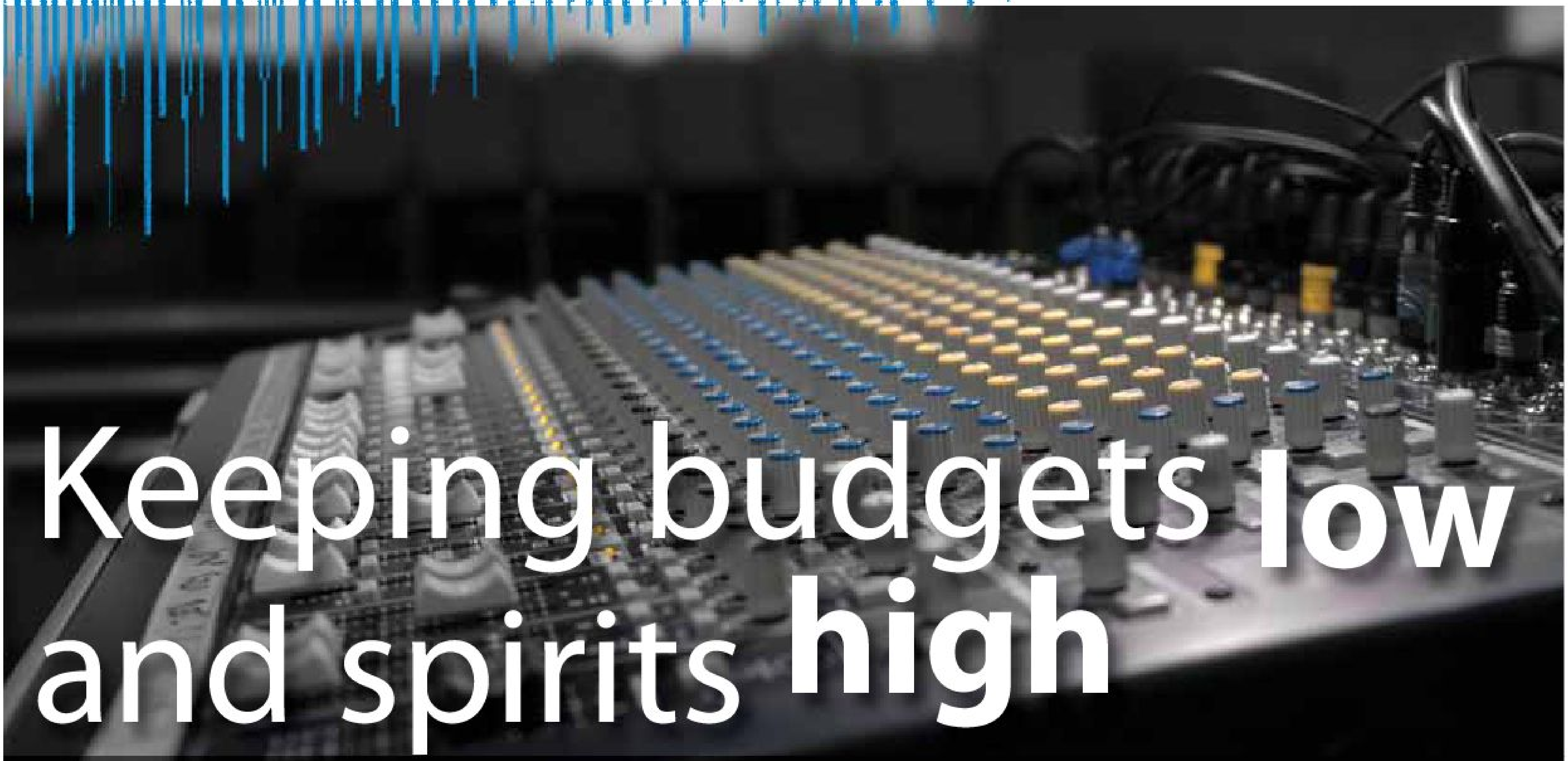

Keeping budgets low and spirits high

In the first of our crop of audio-themed articles, noisebuffet.com's **Ben Long** gives us an overview of the developments in adaptive and generative audio…

Noise Buffet's Ben Long

Creating audio content for games is entirely different than that of film or television. An individual views a movie perhaps three times, at most, whereas a game may be played hundreds of times by one person. Why should we limit ourselves to games that mimic the big screen? That subject has been widely discussed, but with next-gen audio technologies becoming a reality, we now have the means to move the game industry even deeper into sonic bliss.

Adaptive audio has given us the ability to keep a player emotionally engaged for longer periods of time. However, without compelling content, this technology becomes much like a broken tractor, rusting away in the fields: the human touch and proper implementation are both required to work with a game engine.

For the uninitiated, adaptive audio is a term used for describing the use of custom music tracks which contain separate, playable elements called 'stems'. These tracks can then be layered uniquely, creating a soundscape that changes according to a player's journey. The tempo can also be modified to sync with a character's mobility – running, walking or even flying. Taking advantage of this ability not only makes for a more immersive experience, but it can stretch thirty minutes of audio content into sixty minutes.

FOCUS TEST

When properly planned into the earliest stages of game development, adaptive audio can assist with shrinking budgets and timelines. I once had a fortune cookie that read: 'A laser-hot focus on pre-production keeps everyone as happy as clams.' I also recall reading an article that championed the seven P's: 'Prior Planning and Preparation Prevents Piss-Poor Performance'. It kind of goes without saying, but when budgets spiral out of control, organisation and communication are often the chief culprits. Game audio professionals can benefit greatly from using a simple project management application like Basecamp to track the status of audio.

These are basic tools, but they help to form a strong foundation for more creative endeavors. The entire development cycle can benefit greatly from making pre-production a higher priority. If technology only gets faster, better and stronger, then shouldn't we strive to improve our communication, organisation and creative output as human beings?

> ***"Imagine having a Pro Tools workstation inside the console, constantly churning out new soundscapes and music via artificial intelligence."***

With the size and complexity of games expanding overnight, the need for compelling audio content has risen to new heights, and the industry is now exploring creative ways to implement and manage the growing number of audio assets in games. The next-gen audio technologies that are being developed today will be able to create music and effects in real time.

This subject falls into the realm of generative audio, which promises to lighten the CPU load and literally create audio assets out of thin air. Imagine having a Pro Tools workstation inside the console, constantly churning out new soundscapes and music via artificial intelligence. This is a staggering thought, but it's quickly becoming a reality: with effects and music being generated on the fly, audio assets are essentially created for free. This brings more questions than one article can possibly address, but let's just say that AI in game audio is rapidly approaching.

A MAST BUY

New companies are seeking to change the way active media content is created, experienced and commercialised. One company working to make this a reality is Mast Labs, a global engineering R&D group focused on the innovation of bespoke, disruptive technology in the game industry. One of their specialties is taking regular songs and encoding them into a new format that will be accessed by standard gaming systems which will then control, modulate and even unlock music when played alongside the game.

After reading the white papers (and the NDA), I had to pull my chin off the floor and stand back to digest the entire concept. A real world scenario would involve a casual music listener or gamer downloading a top 40 song from his or her favorite music merchant. They could either buy the $0.99 regular version, or the $1.29 enhanced version which unlocks a world of interactivity. The song is instantly 'scored on the fly' to participate with the game action and even has secret codes that when played correctly unlocks game content, and vice versa.

Could this technology be the future of game audio? The reality is that we are still at the helm, responsible for creating a unique game using our tools and imaginations. If the goal is an end product that's hugely entertaining and profitable, maybe we should sharpen our human faculties in tandem with the technology.

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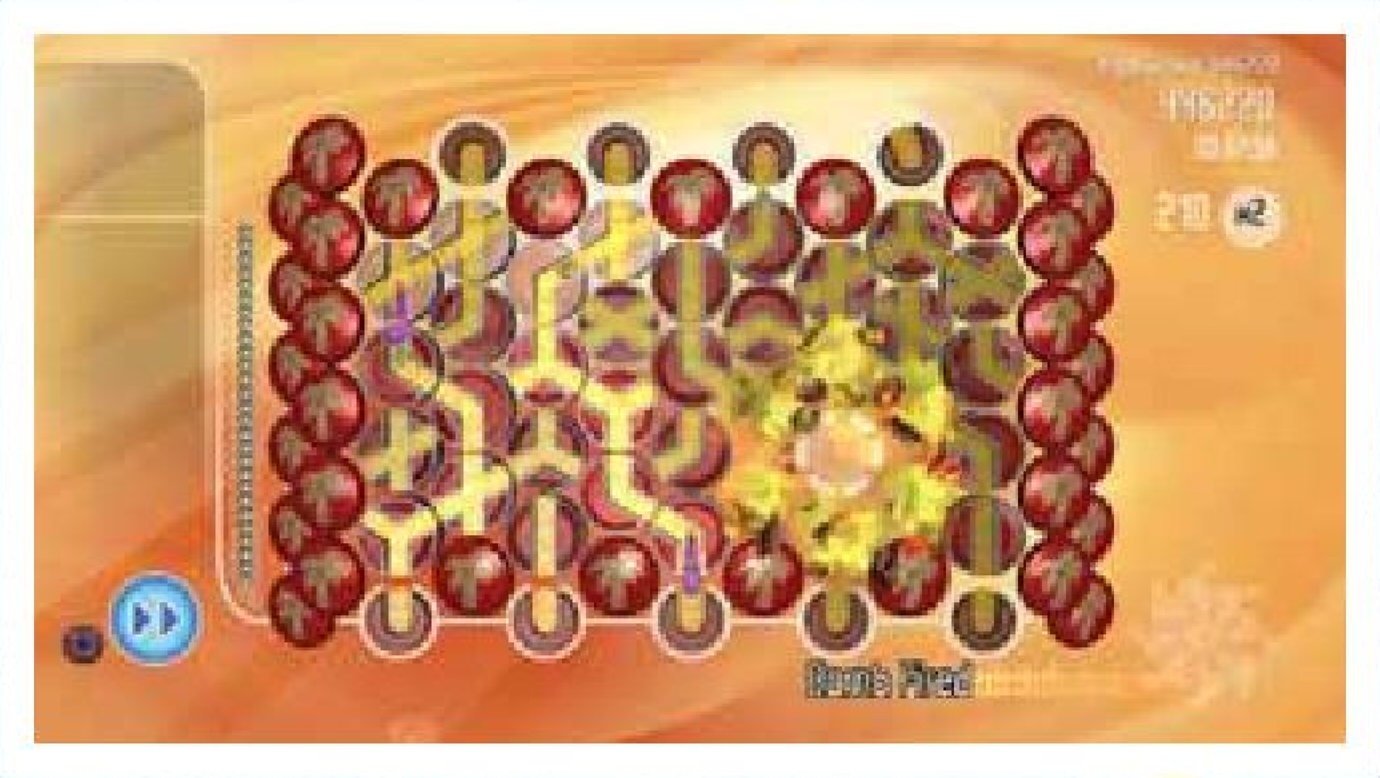


Code to Joy

As audio designers, we have the potential to create the best sounds in the world: we have the full scope of creativity at our disposal, and we are no longer so limited by low sample rates, poor compression and severe memory restrictions.

But the story doesn't end with the creation of this sonic gold: how are the sounds played? How are they used in the game world? What other aspects of the playing of this particular sound might contribute to how it works both functionally and aesthetically?

Early games were made by programmers who created the whole game – the gameplay, the art, the animations and the audio. As games have developed, all these elements have become more specialised: a higher quality was needed than could be delivered by any one person, no matter how talented. Programmers specialising in audio have always been important, but with the power and sophistication available to today's developers, they are needed more than ever.

PROG ROCK

Take a very basic example such as footsteps. These are determined not only by the size, weight and clothing of the character, but also by the surface types they'll be walking on; then comes running, skidding, jumping, landing, and blending between any and all of those. Designing how your sounds will be played is *integral to the work of an audio designer*, but the implementation of those design decisions is generally down to an audio programmer. Without good support from a role of this kind, the best sound design can ultimately be reduced to a buggy mess.

A major part of the audio programmer's role is to give back as much freedom and control to the audio department as possible, just as in other areas of production the new tools being developed are giving artists, animators, level designers and editors more creative power.

> **“*Programmers specialising in audio have always been important, but with the power available to today's developers, they are needed more than ever.*”**

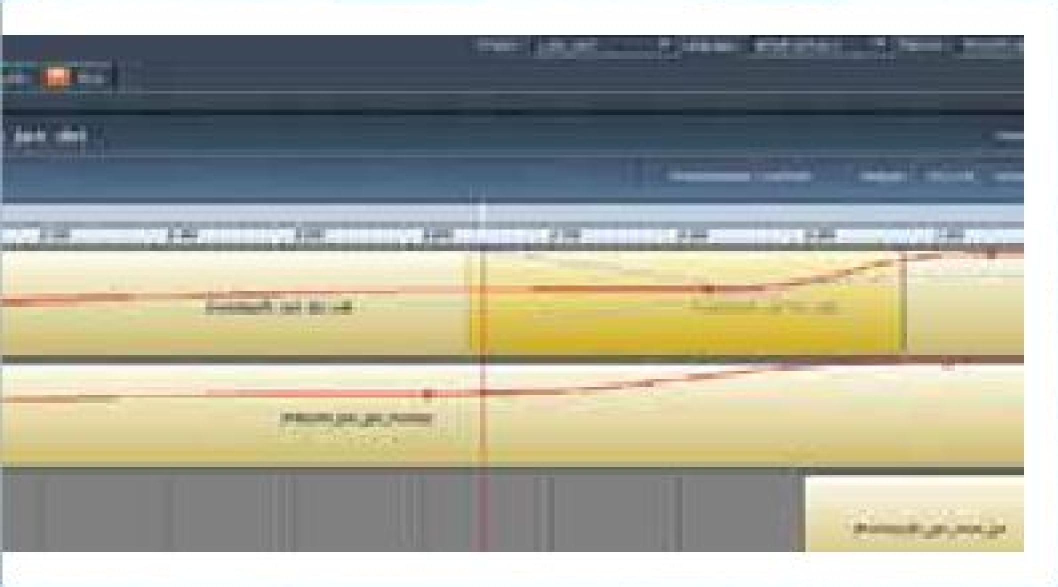
Most advances in audio – as indeed with art, animation and so on – are driven by the demands of a specific game. Very few developers have the luxury of researching offline advances without the pressures of a paying project. Wise developers, however, while creating the particular functionality for whatever they are currently working on, will simultaneously think ahead and construct it in such a way *that their work can be built on for* what might be needed or possible in the future.

BLITZ CREED

At Blitz we've been lucky enough to have great audio support over the years from our dedicated technology team. Back in 2002, we created our own interactive music system for the BAFTA-nominated *Taz: Wanted*, which is a good example of creative tools coming from a programming background. These games required audio to be streamed from the disk and cross-faded during play; faster switching between music and dialogue, and multiple dialogue streams, were also becoming commonplace.

This in turn required support for features such as the ability to cache and read ahead, as well as handling multiple streams. All of this functionality was written into our proprietary technology suite BlitzTech, but at this time it still required a lot of collaboration between the audio designer who created the sounds and a programmer on the game team who triggered the sounds at the right time, at the right levels, in response to the right stimulus. This was time-consuming and frankly tedious, so we began to look at ways of giving more control to the audio designer.

One of our tech team programmers already had a lot of experience with audio coding, but crucially had also worked with audio creation software. One of his most important contributions was to give his tools user interfaces that mimicked those of sequencers and other software with which the audio designers were already familiar. This meant the audio department could work faster and



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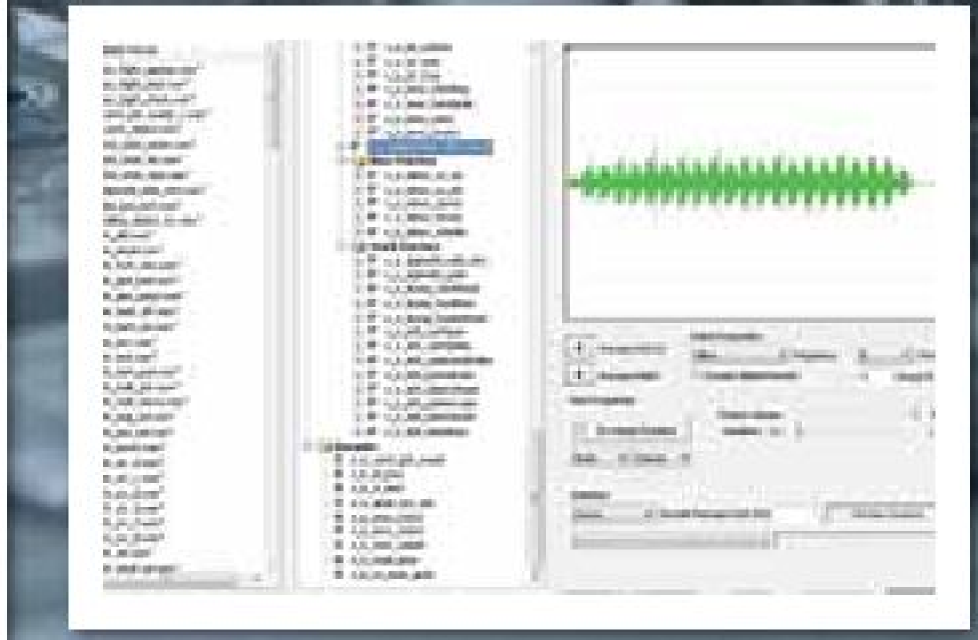

Blitz Games Studios' **Matt Black** takes a look at the role of the audio programmer, and why more should consider it a viable niche to specialise in…

more easily, which in turn encourages experimentation and results in better quality in-game audio.

The interactive music system created back then proved so useful that we used it in many more titles. A different challenge was posed by our first Volatile Games title *Reservoir Dogs* which, like the film, doesn't feature any non-diegetic – i.e. score – music at all. Instead all the soundtrack is placed within the game world and comes out of radios or other similar sources. This required considerable changes to the underlying structure of the code, as did the more advanced use of DSP (digital signal processing) effects to help achieve this. *Invincible Tiger: The Legend of Han Tao* also benefits from this as it needs a lot of realtime effects (distance filters and the like) and also boasts a very complicated interactive music system.

SING++

The *Karaoke Revolution* games, originally part of the *American Idol* series but now a franchise in their own right, again posed new issues for us. There's nothing inherently difficult about supporting microphone input, but the initial challenge here was the waveform analysis which determines the pitch analysis, which has to be done on the fly to gain the correct feedback from the in-game judges and audience.

Part of our solution to this was to experiment with using more than one core. We found quite quickly that, because video and microphone are so time-critical, they performed much better when balanced across multiple cores. Again, a simple enough solution in theory, but in reality this required a lot of trial and error and some pretty nifty coding, as all of these elements have to work together, completely smoothly. No one is going to be too worried if MS Word hangs for a split second before continuing, but when you're singing along to your favourite track, that's really going to stand out as a bad bug.

While some people might argue that the growth of middleware solutions is a consequence of the lack of audio programmers, it's more accurate to say that both can make a great contribution. Talented people with skills and interests in both programming and audio can work with middleware to empower the designers, and also write their own custom solutions to problems thrown up by any specific project.

> ***“No one is going to be too worried if Word hangs for a split second before continuing, but when you're singing, that's going to be a really bad bug.”***

So mature specialist systems such as FMOD can bring a lot to the implementation of great game audio. For example, we mentioned DSP earlier: newer general purpose processors have sufficient power to process audio signals in realtime and effects such as reverbs are implemented in this way, as opposed to being implemented as dedicated hardware processors. Programs such as FMOD and the underlying console interfaces allow us to create our own customised DSP and 'chain' it into the system, allowing us to perform any computation we want on the audio data as it passes through.

This had always been considered too high-end a subject for game audio, but it's now reality at the runtime level and needs a very good grounding in maths and audio to really understand it.

This is one area in particular where certain kinds of people can make a bit of a niche for themselves. Even someone who may not have any experience in games programming but has a deep mathematical basis in signal processing and code optimisation would be ideal for producing high-quality custom audio effects.

So middleware or not, it's absolutely true that the games industry wants and needs more audio programmers. It's the hope of this article that more people out there who share a passion for audio and a passion for programming will consider this most rewarding and fascinating of careers.
www.blitzgamesstudios.com

Above: Matt Black, audio manager of Blitz Games Studios

Matt Black is audio manager at Blitz Games Studios, and was one of only 40 musicians chosen from around the world to study at the Liverpool Institute for Performing Arts, a small unique institute founded by Sir Paul McCartney. Matt was not only in the institute's first graduating class, but one of 5 musicians picked by the ex-Beatle to work on a one-on-one basis on a song writing project. After this Matt went on to study music at Bournemouth University and since 2002 he has been creating audio for Blitz's games.

One Forza petrol heads

It's set to be one of the most ambitious and detailed driving sims available, and that goes as far as the audio too. **Michael French** spoke to Tim Bartlett from The Audio Guys about working on Forza 3…

Forza 3's cars needed to sound as good as they look

How much of the audio for Forza 3 did Audio Guys handle? Had you worked with Microsoft before?
This was indeed the first game that The Audio Guys worked on with Microsoft Game Studios, and we're looking forward to continuing this relationship. We were a part of the *Forza 3* audio team, specifically focusing on engine sounds. The team was led by Greg Shaw and Mike Caviezel at Turn10 studios in Seattle. We were responsible for a sizeable chunk of the engine sounds heard in the game, from an authoring and designer-side implementation perspective.

You're a whole ocean away from the developers – what advantages did this offer? What challenges did it create, and how did you overcome them?
It could be said that we were the *Forza 3* audio nightshift. The Seattle work day starts immediately after we finish here in the UK at 6pm (their 10am). Therefore, it was useful to be able to access servers during US downtime, giving us optimum connection speeds. We also had regular scheduled conference calls, timed to coincide with the end of our working day, and the start of the Turn10 day which worked very well.

The only real challenge was our physical distance from the servers, which could occasionally slow some of the larger downloads such as game builds, but this was rarely an issue with exchanging assets. The Microsoft IT team were excellent throughout: they were on call 24 hours a day and immediately addressed any issues that occurred.

What was involved in the outsourcing process – can you explain the flow in terms of your contribution?
The whole *Forza* audio process is largely governed by the truly mind-boggling numbers of cars in the game, with a number of car audio recordings to match. Thankfully the majority were already in place at the start of the project. The Turn10 team in the US dealt with all further recordings, although we also did a number of car audio recordings for other titles of ours recently.

In addition to the new cars featured in this game, the format for assets in *Forza 3* is different to *Forza 2*, so every single car needed to be revisited, and have its audio authored from scratch. The Turn10 team made the existing recordings available to us, where necessary.

> ***"You can even employ an AI driver, set the car away and then tweak its audio as it drives around the track – it's a sound designer's dream."***

We worked with these recordings as well as many new ones, pulling out suitable assets. For some cars we revisited the edited assets themselves, and applied various techniques using a variety of audio software, giving them some enhancement or more 'punch' if required.

At the final implementation stage, all cars needed to be reformulated for *Forza 3*, using the in-game tools, to tune the assets to the in-game physics and make sure they sound great in the engine.

In terms of asset delivery and exchange, a source control system was used and we were able to access the team's main source control server in Seattle. Therefore, from this perspective, we were simply another member of the Turn 10 team. In addition to this, FTP was used for very large chunks of data such as source recordings, while game builds were handled by recursive download software to keep data sizes and transfer times to a minimum, only downloading changes and updates to any given build.

All in all, considering the distance, the whole process was overwhelmingly successful. It proved, if any proof were needed, that outsourcing is an entirely feasible option, even on next-gen titles where large data sizes and complex game tools are involved.

What can you tell us about the real-time tools used for the game? How has that affected the amount of work you have to do?
The real time audio tools are extremely powerful and enable the audio engine to take much greater advantage of the assets than is usually possible. Therefore, the implementation process does not necessarily cut down the amount of work; rather it enables the sound designer to mould and shape the assets more sympathetically with the car on screen.

The best racing game audio is not going to be created by simply throwing assets at a game engine – for them to sound like a real car, all manner of nuances, techniques and methods come into play to make the assets sound like what the user is expecting to hear.

Therefore, various real time DSP effects are employed as well as many other techniques, directly tying into game physics values, and all curves, volumes and behaviours are tweakable real time within the game. You can even employ an AI driver, set the car away and then tweak as it drives around the track – it's a sound designer's dream.

These tweaked settings can then be stored and automatically written to that car's setup file. Then it's simply a question of repeating the process, with equal attention to detail, for the rest of the cars.

Are you able to give us any figures on how much material you compiled?
TAG worked with hundreds of cars in game, utilising hundreds of car audio source recordings. Each car was revisited several times and went through several major sign-offs. *Forza 3* is a petrol head's dream, and the attention to detail is very demanding: it wouldn't be desirable to simply cut, paste or stamp from a mould, so a lot of loving care and attention was paid to each car. It would be safe to say this took a lot of man hours.

In terms of raw size, the main working folders are over 20 gigabytes, which is purely dedicated to audio work and implementation data and doesn't include builds.
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Is the future of game audio 19.1 speaker systems, or does it lie more in creativity rather than technology? High Score's **Hugh Edwards** gives us his view of where we're going…

Future • Music

Imagine being able to have quite literally any kind of audio you could ever dream of in your game. Is that so unrealistic? If you can hear it, you can record it. If you can imagine it, you can synthesise it. If you have the tools and the expertise, you can manipulate it.

So what's new for the future of audio in games? Primarily, most forms of audio are relatively linear at their origin, be it music, voiceover or sound design. Many of the newer tools that are available to audio engineers, however – such as FMOD and Wwise – have built on this to the point where audio can now dynamically change within sound-scapes. This shift can't be underestimated.

Over the last few projects one of our main focuses has been on education, and helping developers and publishers to understand the possibilities that are now available to them, from dynamic music interaction to real-time mixing and even mastering reactive to gameplay.

For example, have you ever reached a point in a game where a character is speaking but the music at that particular point in time drowns out what is being said? No problem, we can show you how to program a side-chain compressor into your code which will dynamically duck the music against the speech, to ensure that no matter where you in the audio spectrum, everything is crystal clear.

INFINITE POSSIBILITIES

To expand on this, we've recently started work on an undisclosed game where we have shown the developer how we can record specific vehicles, build their realistic engines and then shape those engines in-game. And we can do this not only for first and third-person views, but dynamically for multiplayer using volume, enveloping, real-time compression and reverb as well as specific filtering to create a truly realistic sound – and conversely, we can show you how to create incredibly unrealistic sounds for those types of games where you really want to stray from reality.

There are many game developers out there who do not have a whole raft of in-house audio experts to advise them on what can be achieved today and in the future with audio and its implementation; but they do have the imagination. Working together early on in the production process is the key to this success.

Here at High Score, we've also developed a completely new and innovative approach to voiceover production, by putting all the stages of our project into a new toolset we've had specifically created based on years of experience in voice direction, recording, post-production and QA. We've been creating this over the past few voice projects such as *Il2 Sturmovik: Birds of Prey*, *Jambo Safari* and some other unannounced games, and the system has incredible benefits, removing the human error in processing and allowing focus on the areas where it's needed.

> ***"What's the future of audio in games? It isn't with a new feature – it lies in the expertise of truly understanding what and how music can be manipulated."***

Specifically with QA, this tool allows us to provide a genuine advantage over existing methodologies where we can guarantee accuracy with individual voice files and the project as a whole. The tool also works with video as well as audio and as we move more into recording speech directly from mo-cap actors, this is going to be essential.

05304
Cool!
Want you back
I want you back for good --
TIME
02:16

That Apple Corp has released the 'stems' of Beatles tracks shows just how prevalent the practice now is

Another exciting new area of audio that is emerging comes with record companies now being prepared to release stems, or individually recorded tracks, from the original recording sessions. This means we can take these files and create new and exciting mixes, even in real-time. Of course, *Rock Band* and *SingStar* initiated this process, but if you understand that we can now break music down to its core component level, it only takes imagination to create some seriously interesting titles that aren't just based around a catalogue of Beatles hits. Imagine recording your entire orchestra in stems and then allowing the gameplay to build dynamic mixes of your music, changing every time you played.

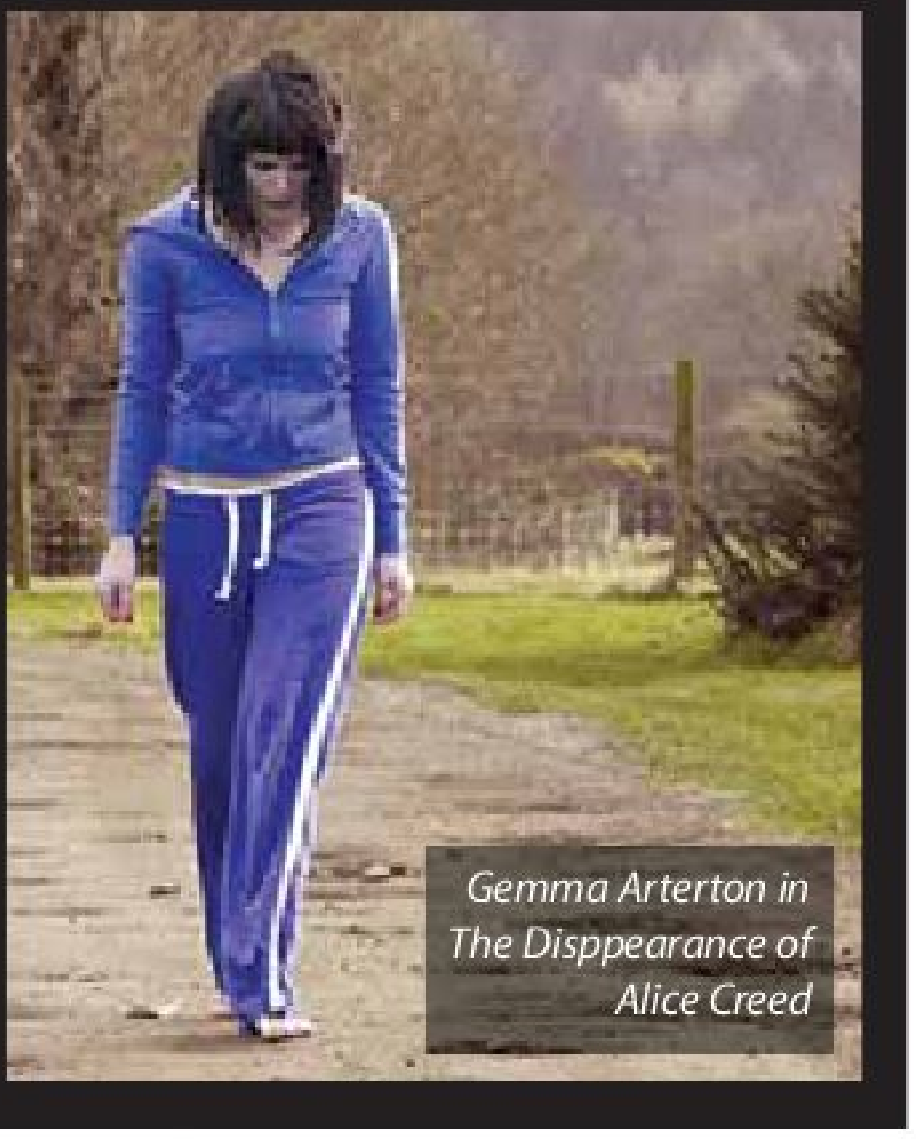
So what's new for the future of audio in games? It isn't with a new discovery. It isn't with a fourth dimension, or 19.1 surround sound. The future lies in the expertise of truly understanding what and how sound can be manipulated, and then using imagination to achieve whatever our minds can conjure. It's not magic, but it can be breathtaking.

www.high-score.co.uk

Scene Select

What happens when a game composer steps into the film world? Nimrod's **Mark Canham** tells us about his experience…

Above: Marc Canham, hard at work



Gemma Arterton in The Disppearance of Alice Creed

Back when *Chucky Egg* was on my computer screen at home, it was film that made me want to compose to the moving image. Step forward in time and I was fortunate enough to find myself as a composer in the world of video games – a world that has proved more exciting creatively and technologically than anyone could have predicted.

However, it was with a new sense of intrigue and excitement that I recently received a call from director J Blakeson, confirming that I would be scoring his upcoming feature film *The Disappearance of Alice Creed*. Despite my enthusiasm, I initially feared being branded as the 'video game composer', knowing that the production company felt they were taking a gamble on Blakeson's belief that I could do it. At this stage one could easily feel paranoid that the film world still sees us as plotters of bleeps and bloops rather than craftsmen of sound.

But what would the film process be like? Having been near the top of one ladder, I was now very much at the bottom of another, and having to learn fast: I only had four weeks to write and complete a 65 minute score. Any advice I recalled was from big film composers at conferences and in articles talking about scoring games, rather than the other way round, so their take would be slightly different. We the video game composers are, after all, 3D thinkers when it comes to audio and interactivity – the linear medium of film in comparison is relatively straightforward.

EMOTION DEVOTION

However, it is the 3D ability of our 'audio' brains that sometimes prevents us from being as emotional in our music as we possibly can. The linear medium of film allows for total immersion in the story the music tells, ebbing and flowing with the drama onscreen. The ability to create that emotion and control its path exactly is a big difference between the two disciplines. It results in creating purely emotional music when scoring a film, whereas games blend a combination of emotional and functional.

With games we have small snippets of cutscenes, *Metal Gear* aside, allowing us to really sync audio with visuals which, admittedly, are then rudely interrupted by the in-game soundtrack. This is the great challenge for the video game composer and ultimately where our strengths lie: in creating variation yet providing enough cohesion so that the music doesn't appear jarringly patchwork or too repetitive throughout hours and hours of gameplay.

> ***"Video game composers are, after all, 3D thinkers when it comes to audio and interactivity – the linear medium of film is relatively straightforward."***

One of the things I found refreshing and inspiring in scoring this film was the closeness with which I worked with Blakeson, and his continuous efforts to preserve and encourage my take on his score. In times when we were being cursed by the temp track and I felt the need to pull away from this, he backed up my decisions and allowed me the space to create.

On the topic of creativity, I think it is vitally important to preserve our 'voices' as composers and try to nurture creative relationships with game developers that allow us to invent rather than conform. In the world of soundtracks the plague of 'sameyness' is widespread, and we should be encouraging different approaches, avoiding where possible the obvious cliches as our only references. Video games can afford to take creative risks, and we have the pool of talent to draw upon so we should use it more to do so.

CHANGING OPINIONS

The production standard side of things is where I feel films currently shine. There is an automatic assumption that, throughout every stage of the music making process, the best possible people should be involved; from producers, to mix engineers, mastering and dubbing. There's no such thing as one person composing through to mastering his own work; a bad habit that we are now moving away from in games.

Alice Creed was recorded at Abbey Road, mixed at Air Studios and dubbed at Pinewood. Whatever compositional ramblings I may have created, at least it would have sounded sonically good as my work was in the hands of the best people. Notably, at no stage did I have to justify this process – the highest standards were the norm and what was evidently expected.

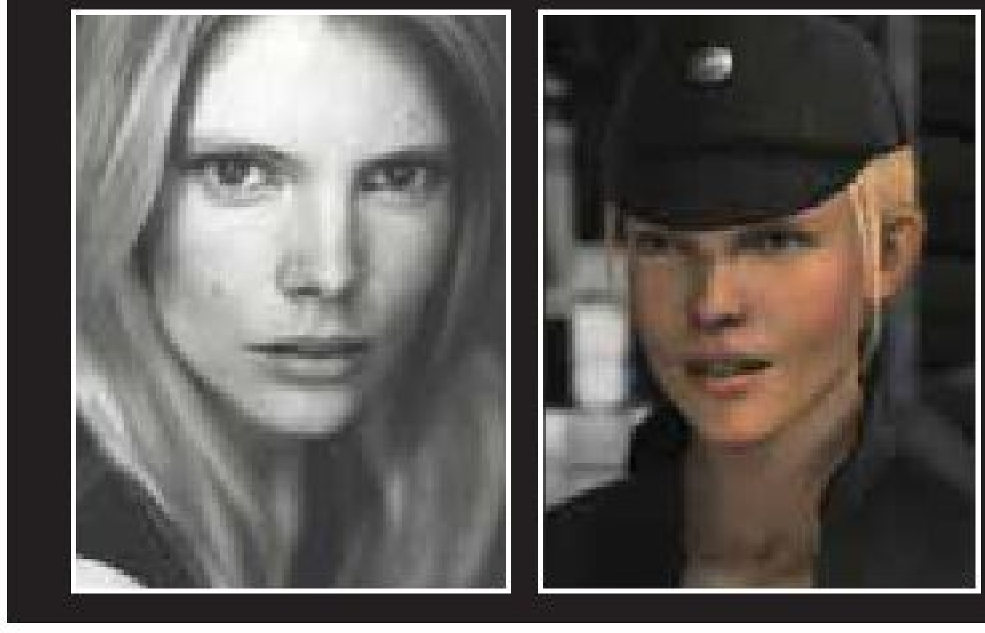
Games are certainly rapidly catching up on 70 or so years of the film score making process. I don't really look at films anymore as a jump up some kind of career ladder or standard of audio. My recent experience suggests that they are slightly different beasts, presenting differing challenges of equal reward.

The reassuring thing for me was that ten years ago I wouldn't have imagined that we would now be in a position to match the standards of film audio, yet our industry is creating soundtracks that are becoming as iconic as great film scores. If we keep putting creativity and standards first, they will undoubtedly continue to do so. Gone will be the days of feeling like the dysfunctional sibling of our film-composer older brother.

www.nimrodproductions.com

It's good to talk

What can having actors and directors involved from the beginning of a project bring to game audio? Side's creative director **Andy Emery** runs us through the benefits…



Side used actress Nathalie Cox's likeness for the character of Juno Eclipse in Star Wars: The Force Unleashed

Above: Side often records dialogue in tandem with the motion capture shoot

With many developers and publishers placing greater emphasis on story and character, the quality of voice acting in games has never been so firmly in the spotlight. So how can developers achieve the 'cinematic' quality desired for many of today's titles?

One of the biggest factors in achieving this leap in quality is ensuring voice work is more than just a post production process left to the end of the development cycle. Making character performances an integral part of the pre- and main production stages opens up a whole range of opportunities to improve the final quality.

CASTING

Beginning the casting process at an early stage enables developers more opportunity to have the actor influence the final character, rather than simply providing the voice. This has been standard practice in the film and TV industry for a long time, but has only recently become a consideration in games.

The many advantages of early casting include enabling writers to tailor the dialogue to the selected cast, and letting actors influence the characters' accents and even the final character art. Taking the further step of securing the likeness of an actor for the character is a sure-fire way to guarantee that the face fits the voice.

ACTORS

A vast swathe of games have traditionally used specialist voice actors to record for multiple characters within a game, and this works well if the character animation is more 'cartoon' in style. But as many of today's titles require a more cinematic style, it's essential the actors have the depth of experience to convey a real and often multi-layered performance.

Using actors experienced in TV, film and theatre, and getting them on board early, provides the possibility of full performance capture. Allowing actors the freedom to fully perform the scene, providing both physical and vocal performance, makes a big difference in how believable the final dialogue can sound.

DIRECTOR

A professional director will make a huge difference to the level of performance you can achieve in a voice recording session. But they can also be invaluable during casting, rehearsal, staging sessions and motion capture shoots, adding an element of continuity with a focus purely on performance.

RECORDING

The process of recording dialogue in games is also evolving, and can now involve as much time recording on location as recording in a studio. Taking the techniques used for film production, location dialogue (from performance capture shoots) recorded with head mounted radio mics is being combined with studio ADR sessions in order to achieve a more cinematic dialogue sound.

WHAT DOES THE FUTURE HOLD?

With an increasing number of quality performances in games, players will become less forgiving of bad scripts and poor acting.

As narrative designers become more adept at delivering a compelling story in ways less obtrusive to game play, the distinction between story dialogue and 'world filling' dialogue will continue to blur. The challenge will be to ensure that all acting in games is believable, from in-game greetings, to death cries, to the epic monologue.

Games have only scratched the surface in terms of how great performances can contribute to the player's experience. It's for this reason the interactive entertainment sector will continue to be one of the most exciting, creative and innovative industries for actors, directors and writers alike.

www.sideuk.com

CASE STUDY: DEAD SPACE EXTRACTION

IN JANUARY 2009 SIDE was commissioned by EA's Visceral Games to carry out casting, direction and recording for *Dead Space Extraction*. It was clear from the outset that the team was taking character performances in the game very seriously.

Visceral was looking for actors to provide not only a vocal and facial performance but also facial likeness to be used in the game. Although the actors needed to have the right voice and the right look, the team were happy to be flexible about accent. The most important thing was to cast a group of distinct, believable characters.

After a process of filmed auditions, the selected cast were all brought together for a table read and further familiarisation with the project. A high percentage of the dialogue was then recorded 'on location' during a performance capture shoot with Side's Justin Villiers directing.

This project involved many of the key elements that help produce high quality dialogue: an early and comprehensive casting process, the use of actors for both vocal and performance capture, getting directors involved in casting, rehearsal and dialogue recordings.

Dolby's dominance

It's the daddy in the cinema world, but Dolby isn't letting up on its push into games. **Michael French** talks to Jane Gillard, senior marketing manager of PC and Games for Europe, to find out more…

Metal Gear Solid 4 is one of the many titles that utilises Dolby's technologies to great cinematic effect

What changes in the way games are developed has driven Dolby to become more and more involved in games?
Dolby's involvement in videogames started back in 1994 with *King Arthur's World* on SNES, the first ever game title to feature Dolby Surround. Since then we've continued to leverage our expertise and heritage in high audio quality to elevate the gaming experience. From a console perspective, we saw a massive leap forward with the introduction of the next generation consoles.

The Xbox was the first console to incorporate real time Dolby Digital encoding, followed by the Xbox 360 and PS3. Dolby Digital revolutionised the audio opportunities for developers and now we see games on the market with in-game surround closely resembling that of the biggest Hollywood movies – this step change has been incredible and a huge leap forward. Changes like this have enabled developers to bring a truly compelling surround sound experience to their games.

Also, the transformation of consoles – the PS3 for example – into connected devices has enabled us to extend the roll out of our Blu-ray audio portfolio to the hi-def audio savvy gaming community. It is fantastic that gamers can now experience all of their entertainment – be it games, movies or music – in full Dolby surround sound and get full value from their surround sound rigs.

Probably the most dramatic change we have witnessed in the last decade is online games. Our latest offering, Dolby Axon, is a high quality 3D voice solution built from the groud up specifically for online games.

What brought about Dolby's move into online gaming?
Online gaming has become a huge phenomenon and we see voice communication as a vital part of the experience. Talking to developers, we heard a lot of complaints about online audio quality: players using mono headsets, bad sounding mics, poor quality codecs and people with audio levels set too high or too low were all causing headaches. We saw this as a perfect opportunity to solve an industry problem.

> **“*Loudness has become a big issue in games – developers are looking to Dolby for guidance, and we're able to draw on our experience in cinema.*”**

Also, with Dolby Axon we can surround-pan voices, associating them with game avatars in a believable way. We can take occlusions into account so if someone goes behind a wall, you'll no longer hear them – until you blow the wall out and they are full volume again. And we have distance attenuation – if someone moves away from you, their voice gets quieter.

Are there any specific things developers are requesting from Dolby to help further improve the audio in their games?
There are two things that jump out here. The first is that loudness has become a bigger issue in games. Developers are looking to Dolby for guidance on volume levels in games, and we are able to draw on our experience in both the cinema and broadcast sectors to help the industry move towards common best practices.

Second, we have heard in the past from the development community that they want height channels for their games. We recently rolled out Dolby Pro Logic IIz, which places two height speakers in the living room. Game developers can now encode their games with height channels, opening up a whole new dimension of game play.

Do you think audio in games has been underappreciated at all?
We are in awe of game audio teams as we understand the sustained effort, creativity and commitment it takes to deliver an immersive audio experience. Perhaps the most underappreciated aspect of game audio is that it must be created and mixed in real time depending on the actions from the players in the game. Once a movie is mixed, it is played back the same way time after time. Most games will never sound the same even twice.

We definitely feel that game audio has been long overshadowed by graphics, but things are improving and it is great to see more and more publishers using full orchestral recordings and professional effects in their games. This has been commonplace for years in cinema and Hollywood has traditionally had a better appreciation of the important role that audio plays in delivering a great entertainment experience. As game developers want to raise the bar, then they will need to ensure that their audio teams get the proper resources and exposure.

From a media and marketing perspective, it is horribly disappointing when we read a review or an advert for a game that makes no mention of the audio – particularly when we know the amount of time and effort that the audio crew for that game put in to make the game sound great, which happens far too often. Game audio definitely deserves more column inches and audio teams need a lot more love.

What areas of gameplay does Dolby Pro Logic IIz improve? And, similarly, how does it help during development?
Dolby Pro Logic IIz, is an extension of the Dolby Pro Logic II algorithm that introduces front height channels, creating a 7.1- or 9.1-channel playback system – or it can be applied to a 5.1 set up too. Extensive listening sessions have established that adding a height dimension to a home theater system brings an enhanced sense of depth and realism to the listening experience. People are also far more sensitive to directional cues from sounds occurring in front than from those behind, determining that front height speaker placement is ideal.

The aim of the technology is to bring a whole new level of realism to game play by enabling gamers to really experience helicopters, gunfire, and rain overhead. The enhanced spatial effects bring an overall airiness to the listening experience; a new dimension of presence and depth. And for games developers, the added dimension increases the realism and immerses players more deeply than ever in the action.

> ***“It’s disappointing when we read a review of a game that makes no mention of the audio – game audio definitely deserves more column inches.”***

Most gamers don’t have surround sound systems – so do developers address making games for both audiences with and without that technology?
According to IDC, 48 per cent of gamers were connecting their consoles to a surround sound system in 2008. This is a considerable percentage and is still on the increase, particularly amongst hardcore gamers who truly appreciate the competitive advantage that audio brings to their gaming experience.

From our perspective, the most important thing is that consumers and gamers enjoy the best possible audio experience for all of their entertainment, from any device and the freedom to tailor their listening experience. So for those that don’t have the space, or inclination for full-on surround sound, it is great that there’s an increasing availability of surround sound headphones, 2.1 surround sound systems and soundbars for example. It’s also fantastic to see device manufacturers raising the bar for audio quality on products that don’t have a heritage of producing great sound such as laptops, netbooks and mobile phones. Dolby is all about the best audio entertainment experience, so any development that supports that is great by us.
www.dolby.com

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The more things change...

…the more they stay the same. Outsource Media UK's **Mark Estdale** looks at how the audio scene has changed in the past decade, and how it's still fighting the same battles now…

Right: Mark Estdale

Looking back to 1996, when I first started in audio, it's easy to see the massive changes that have taken place in the industry. The biggest single difference is in the amount of audio: increased platform memory and processing power has enabled cinematic audio possibilities for scoring, voice and sound design that are virtually limitless. The main constraints now are budget and time; the biggest constraint then was the number of kilobytes. Plus, obviously, along with size comes a natural increase in overall complexity.

In addition to that, audience expectations have also changed. The gaming audience increasingly expects a truly cinematic experience, and this is reflected in game reviews. The sound element can account for up to 20 per cent of of a review and score, and so with raised expectations has come a clear necessity for higher production values. When Outsource Media introduced full voice services to games companies in 1996, based on best practice in film, we frequently got blank looks. Now everyone talks about professionalism, craft and production expertise. What was once seen as unnecessary now is the norm.

APPRECIATION SOCIETY

With this increase in professionalism has, I believe, come a greater appreciation of what we do within the audio community, audience and press – but true kudos is still blighted by a lack of vision for audio within developers themselves. Frequently we find that audio directors are under resourced and under valued. The few teams that we work with that are resourced well generally have board-level executives with an understanding and vision for audio.

> ***"The models, pipelines and studio technology used for animation and film dialogue are inadequate for games."***

BAFTAs and Develop Industry Excellence Awards recognising audio achievement are positive, but until we can get the message across that audio is important – complete with clearly defined production needs and cost benefit – we won't see true commitment. Once we get commitment, kudos will follow – but, in the end, you can't value something you don't understand. In other media, such as animation, the impact of audio and voice performance is clearly understood, resourced and credited, and the kudos corresponds.

Of course, we have to keep one eye on the future too, and that means more complexity. An audio designer would do well these days with doctorates in acoustics, 3D physics and maths.

From our tight perspective as an outsource supplier of voice content, the non-linearity and increasing complexity of game dialogue will (and does) require novel production solutions. The key for any production is getting the right information to the right place at the right time.

The models, pipelines and studio technology used for animation and film dialogue are inadequate for games. They simply constrain creativity when applied in our industry. This is a bone my team and I have gnawed for 13 years but it is only now that the work is becoming truly pertinent. We've already redefined both the recording studio and the processes needed to facilitate true excellence in game dialogue production.

The shape of the team has also evolved. It used to be: casting director, voice director, dialogue engineer and dialogue editor, but these days we have tools and technology programmers in the mix. We no longer use paper, and nor do we use classic script formats.

A STITCH IN TIME

Our perennial message to developers – the one that gets the blank looks – is to get the outsource dialogue team hired as early as possible. Dialogue pre-production is key to good results and the optimum time to get a team involved to add the highest value to a production, is at the character design stage.

This fact increases in importance as complexity increases, but we're still waiting for most developers to get the message. Just like 1996.

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HEARDABOUT

Blur

John Broomhall talks to Bizarre Creations' technical audio guru Nick Bygrave about the company's forthcoming racer…

THIS MONTH'S FEATURED SOUNDTRACK:
Blur

DEVELOPER:
Bizarre Creations

PUBLISHER:
Activision

FORMATS:
360, PS3 and PC

Flashy cars, high-octane rivalry, death-defying driving, beefy weapons and super-dramatic power-ups. Bizarre's first racing title since *Project Gotham Racing 4* promises an intoxicating offering.

Featuring real cars in real locations, *Blur* is more about the excitement and intensity of full-on in-yer-face racing competition than its slightly drier, more technical predecessor. For 'real', read 'Hollywood real', the team's chosen phrase to express a style fundamental which reaches to the heart of the game's sound treatment.

The studio's technical audio guru, Nick Bygrave, is the man to speak to about the technical and creative challenges presented by a more stylised development of the company's renowned racing genre prowess.

"This is our first racing title since *PGR*, but our second with the new audio technology we wrote for this hardware generation," he says. "Having ironed out the kinks, we could focus on audio features specific to the game this time out, and not just the underlying nuts and bolts. The super-realistic approach used for *PGR* gave us a good starting point, but for this title we could play around a lot more to create a stylised sound in keeping with the title's look and feel. I guess the whole team felt some pressure to build on previous successes, but in reality, we're our own harshest critics. We're constantly striving to improve the audio."

Blessed with four audio programmers and six sound designers guided by respected audio manager Nick Wiswell, Bizarre Creations has the manpower and talent to keep thinking the unthinkable and then pulling it off. Apart from the audio lead, all audio staff work closely on all projects, explains Bygrave: "Since much of the content and game systems lie somewhere between coding and traditional sound design, there's overlap between roles – great for communication and the flow of ideas."

The technical bedrock for *Blur's* audio is a modular, data-driven system that gives sound designers control over all aspects of a sound's behaviour while the programmers focus on game code and new features. The creatives can make audio objects which respond to parameters and events from the game, connecting different components together from a library of basic elements. These can manipulate not just audio but also game parameters and events.

"A simple example would be adding a spring component to smooth a car's throttle, making it less 'digital' sounding. At the other end of the scale, one of our sound designers has built a complete interactive music system using it, with virtually no programmer support," says Bygrave.

> ***"The game has lots of big sounds fighting for attention; we want players to hear what's relevant to them."***

As ever, real-time DSP is being used for both 'literal' sound simulation and pure creative effect. Explains Bygrave: "We use quite a few DSP effects (at last count, a 20-car race will use well over 350 individual effects); there are 15 different DSP types in the game from basic filters and compression, through to flangers, bit-crushers and ring-modulators. We use plenty of filters for distance and 3D effects, and even run signal analysis effects, harnessed by the graphics guys for eye-candy. Visually, the power-ups add a neon layer of effects over the entire game world so we follow suit audio-wise, with bold DSP treatments across the whole mix.

"To make the car sound part of the world we have two systems. Firstly, we ray-trace into the world to obtain location and material properties, playing an appropriately delayed and filtered version of the car from the reflected image position. This is then mixed with a frequency domain verb for late reverberation – there are zones on the track tagged for different presets. This creates a simple but effective model of the changing environment, and gives the player useful game-play feedback.

"There are also run-time mastering effects like EQ, and basic compression presets which facilitate different dynamic ranges for different listening environments and set-ups. Because there's so much sound going on, we've used more compressors than in our previous titles to keep levels in check before the final mix-down."

Add a kicking soundtrack of custom music mixes courtesy of Ninja Tune to the soundscape, and surely you have a recipe for mix cacophony? "The game has a lot of big sounds fighting for attention, and we really want the player to hear what's relevant to their situation at any given moment. With 20 cars on track, all using power-ups on each other, things can easily get out of hand, so to keep the mix from becoming a wall of noise, we use channel compressors as well as RMS level monitoring to automate ducking. We also use filters to make space in the mix without having to continually turn things down. I think we've hit a balance of managing the intensity and chaos while always delivering an interesting mix. Maintaining clarity when things get hectic was a challenge, but I think we nailed it."

Above: Bizarre Creations' Nick Bygrave

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www.johnbroomhall.co.uk

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>
> **Paul Farley, Managing Director, Tag Games**

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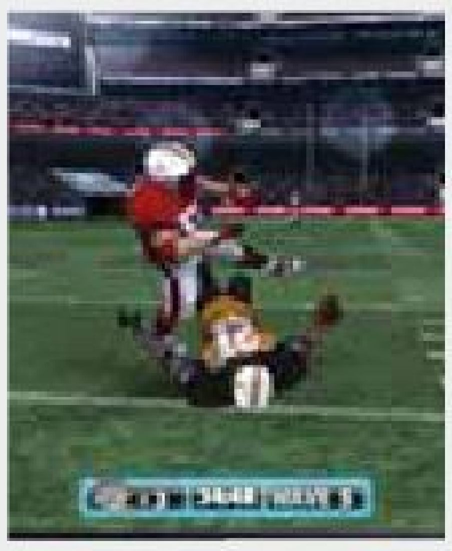

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WAVE SCORE 0
TOTAL 9070
x3
37:36
WAVE 5

EPIC DIARIES: MUVIZU TALKS ABOUT THE UE3 COMMUNITY > P57

Town Square

ONE OF THE MOST interesting things that I saw at CEDEC in Japan last month – which was brilliant, by the way, and a conference that everyone ought to try at least once – was a demonstration by a member of Square Enix's newly-established research and development team. Part of the remit of the Square Enix Research Center, as it's now grandiosely called, is to experiment with emerging technologies and investigate the possible applications in real production environments.

The talk was actually from a University of Edinburgh graduate, Joel Horne, who works as a lead researcher at the institute. His (largely self-chosen) avenue of research was a project called Town+, which sought to see whether modern 'crowd AI' solutions – in this case, Kynapse coupled with Human IK – could take the town of Rabanastre from *Final Fantasy XII* and turn it into an area bustling with life, rather than just a number of NPCs walking pre-planned routes.

The project also entailed changing the engine from Square Enix's proprietary PS2 tech to Unreal Engine 3, which wasn't without its pitfalls: the biggest of which was that the original environment model for the town actually had too many verticies for UE3 to handle effectively (apparently a common problem, said Epic's Jay Wilbur just the day before, because Japanese developers tend to model levels as a single mesh as opposed to creating it in parts and then assembling in a level editor).

While no doubt many big developers have similar things going on, it was interesting to get a glimpse into the things that Square Enix considers worth dedicating resources towards to explore. And the crowd – of which there were hundreds – asked detailed enough questions to imply that they were eager to try the same.

Ed Fear
ed.fear@intentmedia.co.uk

Natural selection

Morpheme, Endorphin and Euphoria creator and animation specialist NaturalMotion is known for high-end engines for next-gen machines. So why is it trying to cram all its smart tech into the tiny iPhone? Turns out the two are a fairly good fit, CEO Torsten Reil explains to **Develop**…

Is there a need for middleware on the iPhone?
We're seeing a clear trend towards higher production values on the iPhone, so the arguments for middleware – that you save time and money, and can license differentiating technology – are starting to apply to this platform. While the need is only nascent at this stage, fast forward a few years and I think it will be commonplace to use third party game technologies on mobile platforms.

Were you surprised by the device's power?
We've been very surprised by the processing power of the iPhone. For example, even the 3G is able to run our Morpheme animation engine on multiple characters, using the exact same assets as the PS3 and Xbox 360. The 3GS is substantially more powerful again.

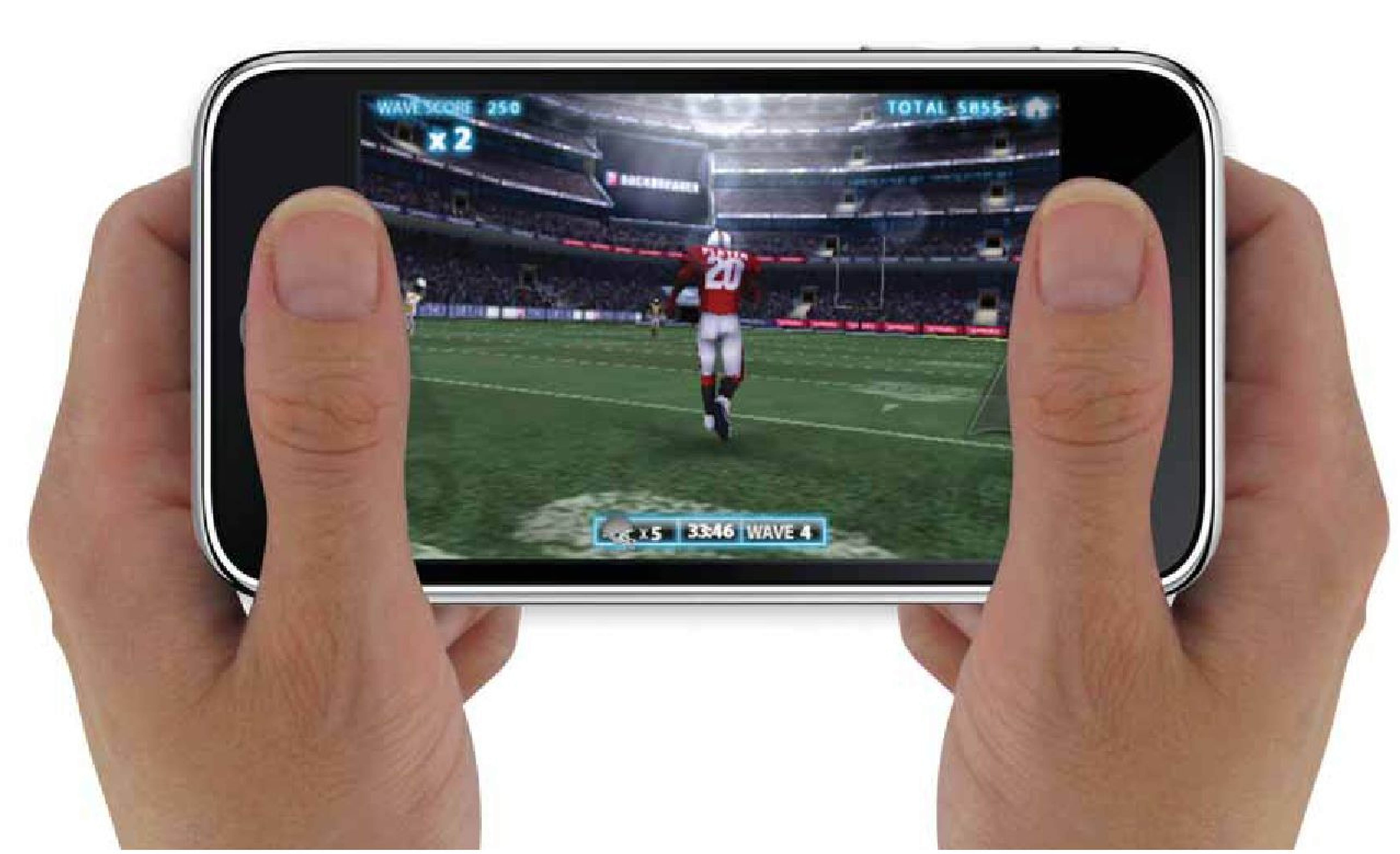
How did the Backbreaker iPhone project come about?
The game has been developed by Ideaworks3D in London, with whom we have a middleware partnership for mobile platforms. *Backbreaker* on the iPhone was a great test and showcase for this collaboration as it runs both Morpheme and Ideaworks3D's Airplay SDK.

Do you think that the low price points prevalent on the App Store make for decent margins?
Low price points are very attractive as long as there's a large volume of transactions. A $0.99 price point for a game seems low in comparison, but the iPhone makes up for this with a large install base and extremely low purchase barriers.

Given those low price points, how would you consider amending your pricing structure to appeal to this market?
The games' per-unit price points aren't really important for setting middleware prices. Average revenue and risk-profile per title, on the other hand, are. If people don't make much money per game, they can't afford to pay much for technology. Equally, if there is high revenue potential but it's hit-and-miss, the middleware pricing structure needs to reflect that too.

> ***"A $0.99 price point for a game seems low in comparison, but the iPhone makes up for this with a large install base and extremely low purchase barriers."***

How has the collaboration with IdeaWorks3D worked, both in terms of the iPhone title and the morpheme middleware?
Ideaworks3D approached us with a view to bringing console technology onto multiple mobile devices via their Airplay SDK. As it didn't take them long to get Morpheme up and running on multiple devices, we looked at a first showcase application together – the natural choice was *Backbreaker* since we were able to



The quality of Backbreaker on iPhone, developed by Ideaworks3D, has to be seen to be believed

use a wide range of assets created for the PS3 and Xbox 360 version. Ideaworks3D then used Endorphin to create a large variety of tackles, which in turn were connected up in morpheme networks. The iPhone game itself is a variant of the 'Tackle Alley' mini-game in the home console version.

You originally announced the partnership with IdeaWorks3D and teased the Morpheme port at the beginning of the year. How has the response been so far?
The response has been great, but I think it will take some time before the iPhone and other mobile devices will rival our console business. This market is moving very quickly however, so we are making sure we are prepared to adapt to it rapidly on all devices, hence the Airplay SDK integration.

How do you think something like Morpheme can help iPhone games reach 'the next level?'
morpheme on the iPhone lets developers create high-end 3D character animation usually only found on next-gen consoles. And while not all games require high-fidelity characters (such as *Flight Control*), there is a clear trend towards animation usage, be it in *Gangstar*, *NFL 2010*, *X2 Football*, *Backbreaker* and many others. We want to make sure we provide developers with the right tools to achieve the necessary quality.

Has learning about the power of the iPhone given you any further ideas?
The iPhone has made us take mobile platforms much more seriously than we did about 12 months ago. It is now clear that our technology can run on a lot more devices than just consoles and PCs. We are looking very closely at this market, not just from a processing point of view, but also with regards to the fact that it finally introduces large-scale digital distribution models. And whilst previously fragmentation on mobile platform has been an issue, technology such as the Airplay SDK can make a single middleware integration available not just on iPhone but on Android, Symbian and other native platforms.

> ***“The iPhone has made us take mobile platforms more seriously than we did 12 months ago. We are looking very closely at this market.”***

Even with flexible engine and middleware pricing models, however, I am concerned that indie developers on these platforms are being held back by the high cost of DCCs and content generation. We have some ideas how this could be fixed, which we're currently evaluating.
www.naturalmotion.com

GAME SETUP
NAME
PLAYER
SKIN TONE
JERSEY NUMBER
42
PIONEERS
BACK
PLAY

GUIDE: MMO ENGINES, PART 2

There's more choice than ever if you're looking to build your own online world, **Ed Fear** discovers…

Last month we delved into the rapidly changing world of the MMO, looking at how the triple-A 'standard' engines were mounting an assault on the 'purpose-built' BigWorlds and HeroEngines of this world.

Without enough space to highlight all of these shapeshifters, let alone some of the more interesting entities springing up on the side, it seemed amiss to not continue the round-up this month too. So, in addition to putting the spotlight on CryENGINE 3 – the previous iteration of which has seen quite a lot of uptake in the Far East, the mecca of MMO development – the focus here is on the game-changers; the new entries into the market looking to not only target the big-league hitters but also low-end developers, those looking to embrace the new world of browser-based gaming and even one empowering its users to create and share their own online game experiences.

While these tools might not be quite as immediately desirable as *The Old Republic*-powering HeroEngine, for example, it's worth knowing what they offer, and what possible benefit you could get from them. Metaplace, for example, looks like just another virtual world, but the rapid scripting and building could make it a useful way of testing out new game ideas in a multiplayer environment.

UNITY

DEVELOPER
Unity Technologies

CLIENTS
Cartoon Network, EA

PLATFORMS
PC, Mac, iPhone

PRICE
From $299

CONTACT
Via website

Cartoon Network's FusionFall was the first title to prove Unity's potential as an MMO engine

www.unity3d.com

One of the bright rising stars of the game engine market, the buzz surrounding the Danish newcomers is in part thanks to its support of the New Holy Grail for many brands: the browser-based MMO market. At present, many of the back-end integrations need to be done manually, but the company is currently working on making the solution as 'out-of-the-box' as possible. EA's just picked it for its next Tiger Woods game, and at least nine other MMOs are in development.

CRYENGINE 3

DEVELOPER
Crytek

CLIENTS
NCsoft, XLGames, Avatar Reality

PLATFORMS
PC, Xbox 360, PS3

PRICE
Available on request

CONTACT
Via website

Aion is powered by a previous version of the CryENGINE

www.cryengine3.com

If it sounds like Crytek is just following Unreal into the MMO market, the German firm actually has a history in the space equal to, if not longer than Epic. In fact, the hottest MMO launch of the moment – NCsoft's *Aion* – counts the previous generation of the CryENGINE as its backbone. Looking at the specs of the new version gives little information as to what's new in this iteration, but the new infinite world and streaming systems will definitely be of interest.

TORQUE MMO

DEVELOPER
GarageGames/Prairie Games

CLIENTS
Prairie Games

PLATFORMS
Windows, Mac

PRICE
Open source

CONTACT
Via website

Minions of Mirth had over 70,000 registered players – a lot for an indie MMO

www.mmoworkshop.com

Okay, so this isn't going to be powering Blizzard's next MMO in its current incarnation – the most stable version uses the two-generations-old Torque Game Engine as its base – but it is a production-ready solution that has been used to create one of the most successful indie MMOs, *Minions of Mirth*. What is interesting is that it's open sourced for those who already own TGE and the ArcaneFX effects add-on, and that a version compatible with GarageGames' new glitzy Torque 3D is in the works.

METAPLACE

DEVELOPER
Metaplace

CLIENTS
N/A

PLATFORMS
PC, Mac, Linux (Flash)

PRICE
Free

CONTACT
Via website

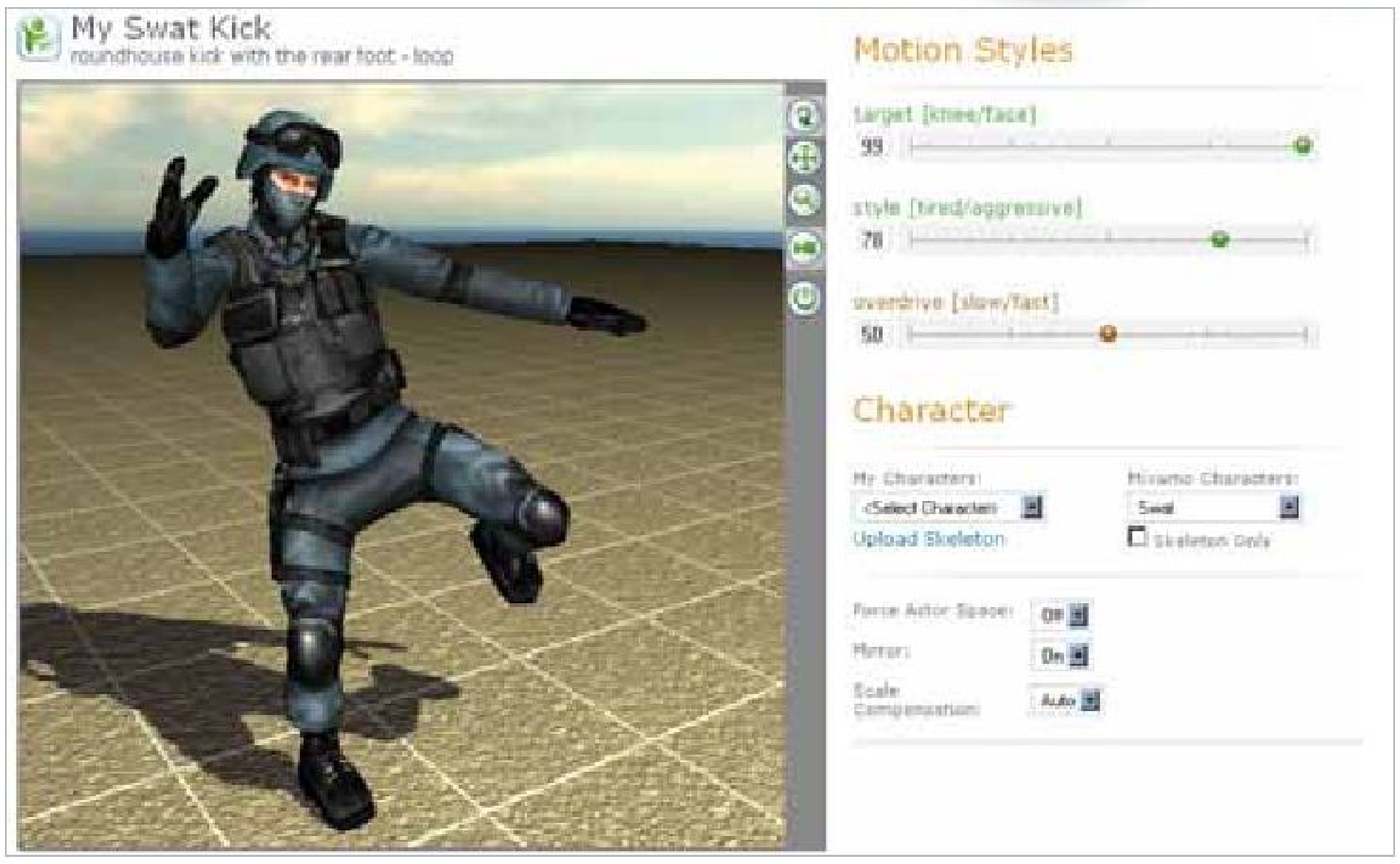
Raph Koster's new project Metaplace is now in open beta

www.metaplace.com

The true wildcard of this bunch, Metaplace is an online virtual world that enables its users to not only do all the social stuff we're accustomed to, but also to create games – even going as far as their own MMOs. The current client is written in Flash and thus needs no plug-ins, and users can quickly construct spaces and script items with a Lua variant. Whole new systems, such as questing or even Amazon integration, can be added via plug-ins, and worlds can be embedded in social network profiles.

Autodesk Games Insight

The latest scoop from Autodesk Media & Entertainment


My Swat Kick
roundhouse kick with the rear foot - loop

Motion Styles

target [knee/face] 99

style [tired/aggressive] 78

overdrive [slow/fast] 50

Character

My Characters: <Select Character>

Upload Skeleton

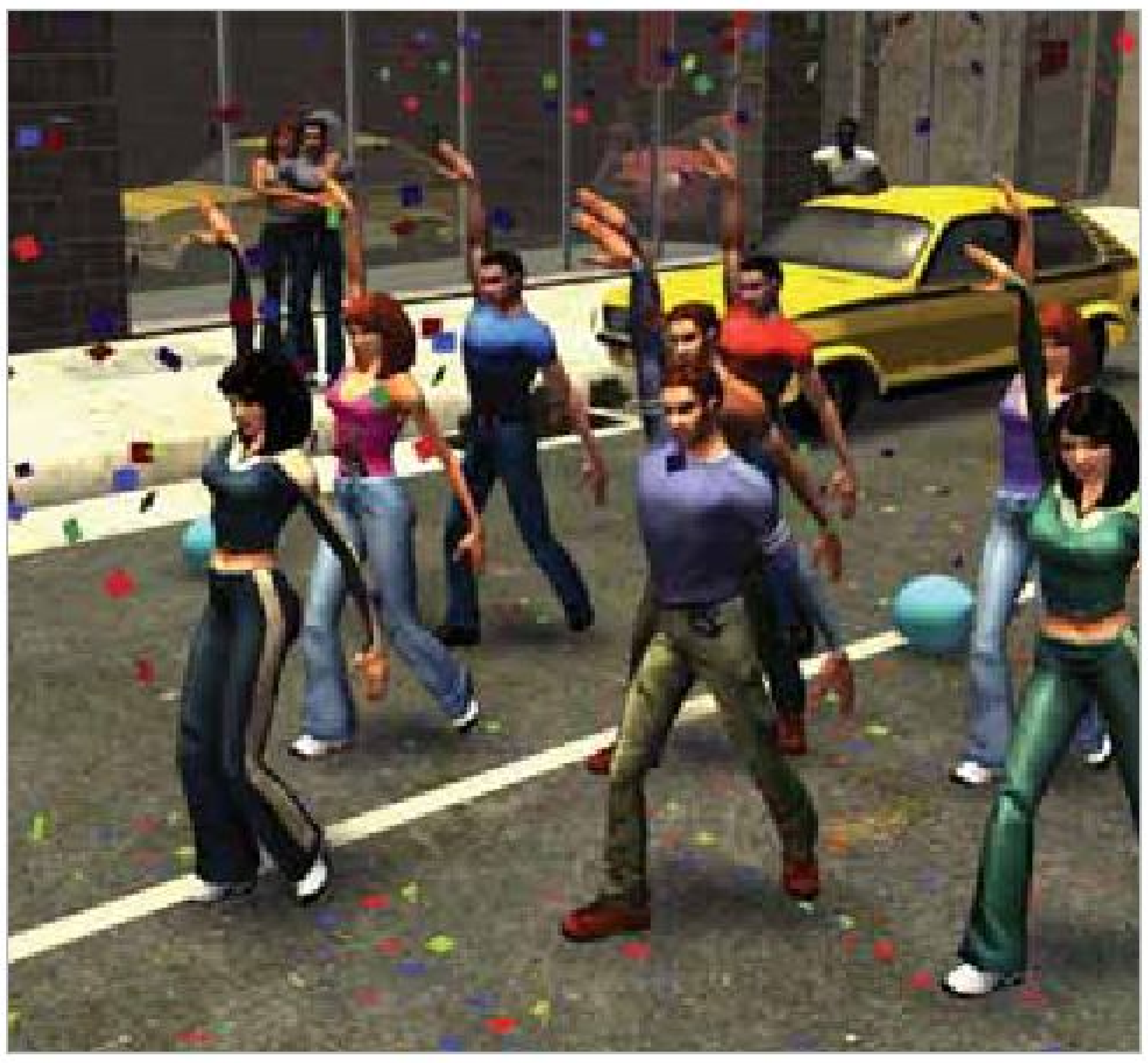
Mixamo Characters: Swat

☐ Skeleton Only

Force Actor Space: Off

Mirror: On

Scale Compensation: Auto



Mixamo combines cutting-edge research and Autodesk games technology to help accelerate the character animation process.

MIXAMO MOTION MODELS

Mixamo is an online animation service that helps users to create production-quality 3D character animations on the web, which are customised and re-targeted to their own characters. The Mixamo website (www.mixamo.com) offers a large collection of motion models, which can be customised for game studio needs using an intuitive interface powered by advanced technology underneath.

"Mixamo is geared towards game studios that face project constraints, whether that's related to reduced budget or production cycle deadlines," says Jon Burns, product marketing manager for Mixamo.

"The coolest thing we offer is the initial baseline lifting for game artists, which frees them up to focus on the creative aspect of their character's animation. It fits quite well with iPhone and other mobile/handheld game developers that don't have much time, yet want high quality productions."

The underlying technology of Mixamo stems from four years of research by Stefano Corazza, CTO, at the Stanford Biomotion Lab. His research focused on two concepts: markerless motion capture and generative models. Using the latter helps give Mixamo users the ability to customise motions into hundreds of thousands of unique combinations using intuitive sliders. Mixamo also uses markerless motion capture technology which enables difficult motion captures, such as quadruped animals, which will be rolled out on the service soon.

To implement Mixamo, the team relied on several key Autodesk technologies. Autodesk MotionBuilder software is used extensively for the motion capture of the clips," Autodesk HumanIK animation middleware is integrated into the website service to provide real-time IK adjustments. Autodesk FBX was chosen as the format to manage and move data.

CLIENT TESTIMONIAL

> ***"The huge advantage of HumanIK is that it's extremely fast and optimised from a code perspective. We're running everything in real-time."***
>
> *Stefano Corazza, chief technology officer, Mixamo*

"Our motion capture pipeline relies heavily on MotionBuilder – which we love," states Corazza. "It's very important that what we see on the web is the same as what we see in MotionBuilder. That's why we use HumanIK. The huge advantage of this is that it's extremely fast and optimised from a code perspective. We're running everything in real-time."

CUSTOMISING ANIMATION

"Other services have approaches where you tweak a model or animation and it takes several seconds or minutes to update the result. Mixamo animation customisation is all real-time. We needed something that would respond very quickly, which HumanIK provides.

"Since we're using FBX technology, and considering that HumanIK, MotionBuilder and FBX are integrated, there was added value for us in using all three technologies collectively."

Why did such a capable team decide to integrate HumanIK instead of writing their own animation middleware?

"From the moment we got HumanIK, to the moment we were first able to run it on our pipeline, took approximately one week. This is very fast in terms of integration. The product is very modular and can be plugged easily into existing pipelines.

"If you were to write your own IK system, you would spend six months to one year on development and wouldn't really be sure if it met the quality bar until that initial, heavy investment," continues Corazza. "This is a huge unknown, especially for a start-up. It was a risk management decision. Because HumanIK is integrated into MotionBuilder, we were able to test it before buying the middleware. We knew that HumanIK would deliver the same thing. This was a good way of testing the product before we integrated it."

Mixamo demonstrates the merging of several impressive technologies: generative models and markerless motion capture with Autodesk HumanIK, MotionBuilder and FBX. This combination improves the 3D character animation process, helping to reduce production times and boost the creative output of 3D game artists and design professionals.

For more information on Autodesk games software and middleware please visit www.autodesk.com/games

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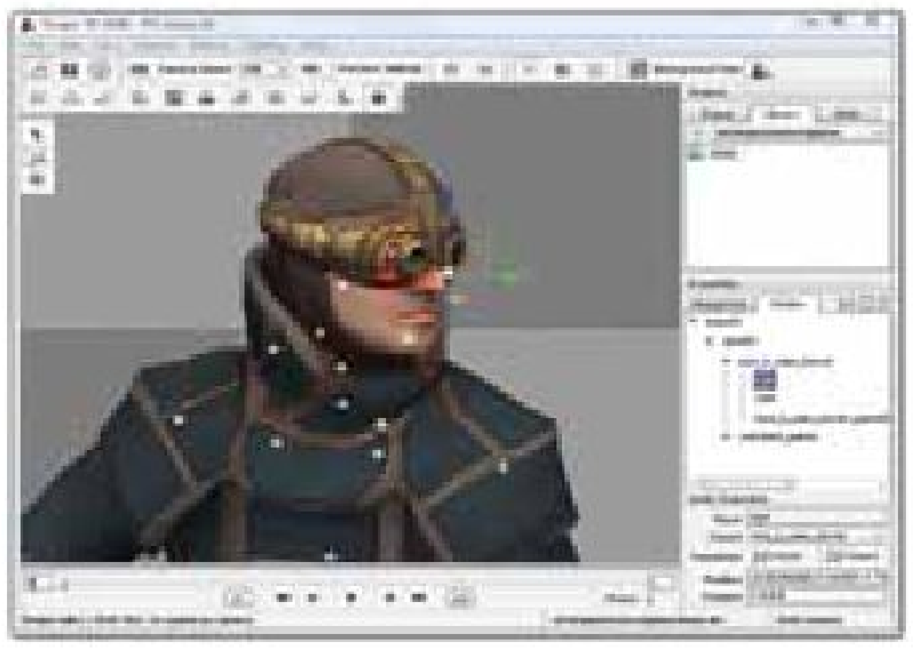
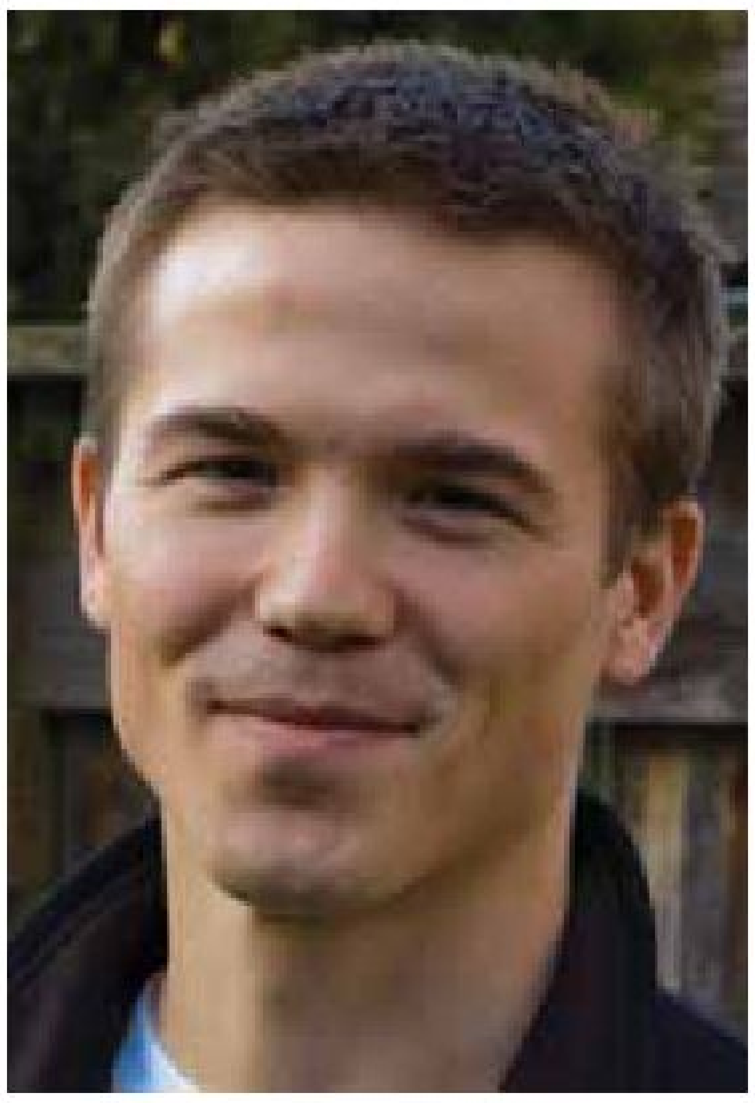
KEYRELEASE

Torque 3D

The granddaddy of prosumer game engines has returned with a new top-of-the-range offering – and it's got usability in its sights, **Ed Fear** discovers…

DEVELOPER: GarageGames
PRICE: $250 to $3,000
CONTACT: licensing@garagegames.com
www.garagegames.com





Far left: Torque 3D's sexy new volumetric light rays work out of the box

Left: GarageGames' Brett Seyler

Above: A scene lightmapped by optional plug-in pureLIGHT

Back before Unity was the talk of the engine market, back before Microsoft claimed the term 'democratising development', GarageGames pioneered the concept of a 'prosumer' engine. Production-quality through its heritage as the *Tribes 2* engine, powerful enough to underpin retail-quality games, and at a price that even hobby developers could afford, the Torque Game Engine – as its first iteration was then known – ushered in an era of engines and tools empowering a wide range of people to help them on their first steps into game production.

TOOL TIME

In the intervening time, there's certainly space for others to come in and innovate. If Torque had a weakness, it was that it wasn't as friendly as it could be. Editors didn't exist for things like particles, for example, meaning they had to be defined in code.

So while the latest entry into the Torque family certainly has the high-end bells and whistles you'd hope for – screen-space ambient occlusion, a high-end pre-pass lighting system, PhysX built-in, and much more – the main focus for GarageGames has been on rebuilding the interface from the bottom-up to open the tools up to people other than the programmers.

"In the past, we put 3D engine features ahead of the tools to expose them in an accessible way," says Brett Seyler, VP of business development for Torque at GarageGames. "This left us with a powerful, feature-rich engine that we and other experts could do incredible things with, but it was of limited utility to artists and other developers with less than stellar programming skills. Torque 3D delivers tools that any artist or modder can get results with quickly. The content pipeline is fantastic – not only can you get any asset into the engine in seconds, but you can make important tweaks to it too. You can define animation key frames to build new animations or modify your assets node structure for mounting the camera and other objects."

> ***"In the past, we put 3D engine features ahead of the tools to expose them. Torque 3D delivers tools that any artist can get results with."***
> Brett Seyler, GarageGames

FORMAT WARS

All this means that as well as adding dedicated editors for terrain, decals, rivers, roads, materials, and particle effects – among others – the engine will now re-import assets on the fly as they change in their original authoring tool, both on the PC and on Xbox 360, PS3 and Wii.

On the topic of assets, another of the major changes for Torque 3D is its embracing of the COLLADA standard for all asset interchange – a dramatic step away from the bespoke DTS format that underpinned the previous versions.

"COLLADA is a true interchange format with growing support and adoption," adds Seyler. "We take it very seriously and expect it to be the only way developers get their assets into Torque.

"The old exporter route, specific to each art application, was just painful for users and painful for us to maintain. There are too many art tools and they are updated too often, whereas every major art tool supports saving to the COLLADA format."

That doesn't mean DTS is dead, though, Seyler comments: internally the publishing tools strip down COLLADA files to create tight binary files for shipping.

"Having a highly-tuned binary format for game assets that you actually want to ship is a must. You don't want to ship COLLADA files, especially if you're targeting embedded devices with limited memory like the Wii. The artists will only ever touch or see COLLADA; however, we want to keep artists in the environment they are comfortable in, using the skills they already have. The project manager can generate a stripped down, optimised build targeting any supported platform with one-click at any time."

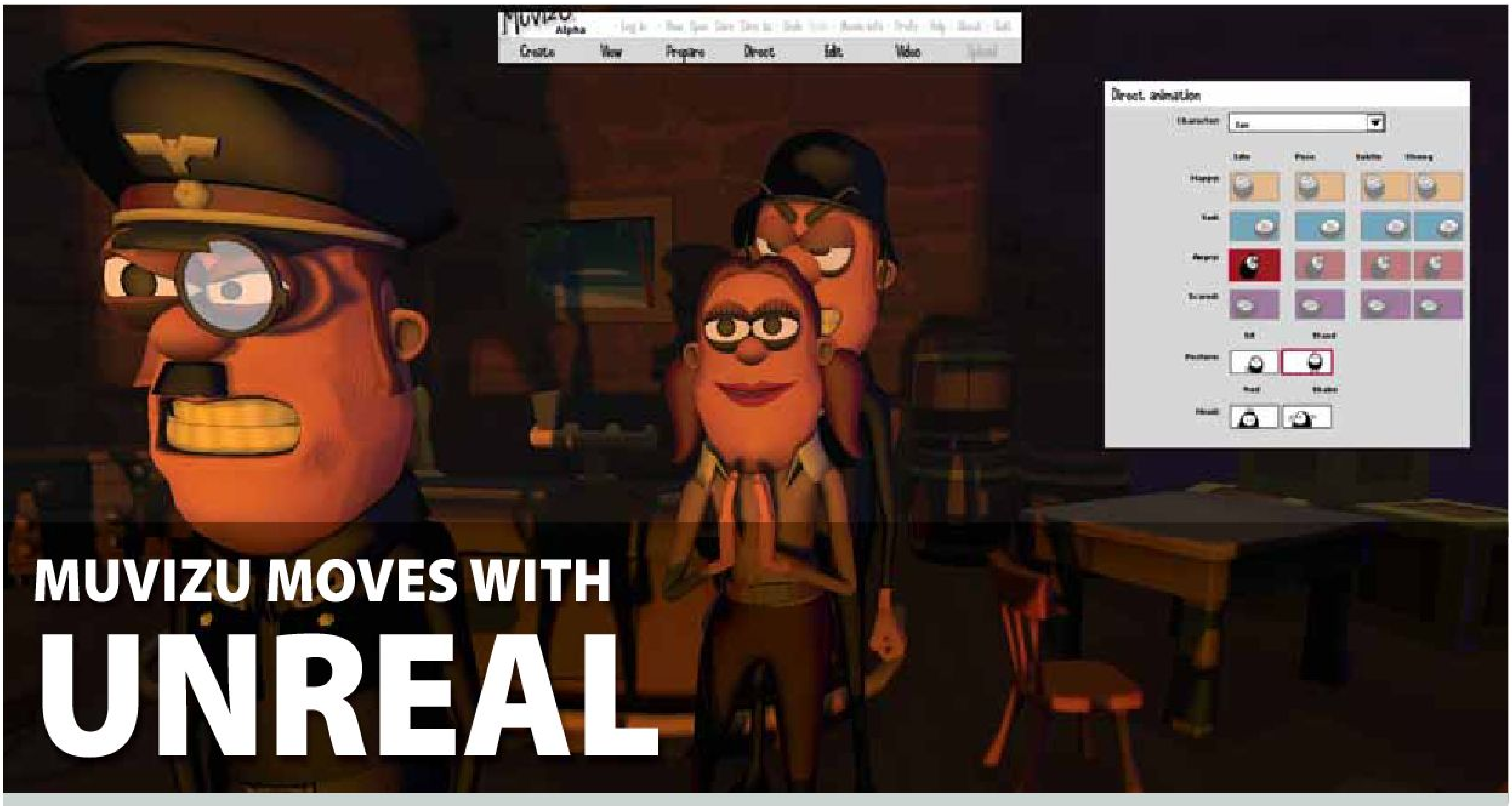
www.garagegames.com

STICKING TO THE WEB

The web publishing feature – essentially the ability to develop games that play in-browser – is another of the big focuses for Torque 3D. It's no surprise that the company is putting its resources there: after receiving $80 million investment from IAC, GarageGames launched InstantAction, a high-end browser-based gaming portal. Is it fair to say that the team now sees web technology running through its veins?

Seyler explains: "As a company, we're definitely 'all in' on web games and web technology, and this is a key focus for Torque. I think that browser-based gaming is critically important for developers, both independent and professional, to embrace. It's a tidal wave that's not even begun to crest.

"Since the emergence of social networks and web-based connectivity tools, game developers have been trying to wrap these features in games. But these features don't work and no gamer wants to create a new social profile anywhere. I think the smartest approach right now is in leveraging the openness of the dominant social platforms that exist today. Facebook is king right now, so delegating the 'social' part of social games to them makes perfect sense."



MUVIZU MOVES WITH UNREAL

Glasgow-based Digital Animations Group recently released the public alpha of Muvizu 3D, a new animation package powered by Unreal Engine 3 that lets users of all skill sets create 3D animations with no experience required.

The Muvizu application includes all the assets and tools needed to create 3D movies and is available for free download from www.muvizu.com. This portal enables users to collaborate on film, audio and drama projects with easy-to-use tools and viewable results.

"We chose Unreal Engine 3 because it is proven technology with an excellent support network," says Vince Ryan, managing director of the consumer unit at DA Group. "Furthermore, the engine accepts assets created in Maya, and this will lower the barrier to entry for our users when everyone will eventually be able to submit their own creations for others to use within the Muvizu community."

The philosophy of Muvizu 3D is for content creators to put less energy into animating characters and more into directing them onscreen. The goal is to foster collaborative filmmaking by uniting people with contrasting skills through Muvizu's virtual workspace and storyboarding capabilities.

During Muvizu's development, DA Group relied heavily on Unreal Engine 3 for rendering, physics and scripting.

"The power of the scripting system allows code to be developed much more rapidly than if the entire engine was in C++," says DA Group's lead developer, Robert McMillan.

McMillan explains how his team came to work with Epic and ramp up to hit tight production deadlines by leveraging the Unreal Developer Network. "In the early days, we had been in touch with Epic about using Unreal for another project that never went ahead. We'd had discussions with Mark Rein, who even came to visit our office. We didn't know what to expect, but the help and assistance was really good. Epic was flexible with us while the licence was negotiated.

"In terms of the software, we got more than we expected," he continues. "We found through UDN that people have been building add-ons for the engine for awhile. Technology integrations for features such as animation blending systems and UI tools are available, so UDN saved us from having to do this type of integration work ourselves. There is definitely a feeling of community, and it's dedicated, patient and helpful beyond the call of duty. Without UDN, we would probably have had to delay our launch for many months."

Ryan is also impressed by how helpful the community of fellow Unreal developers was. "We had expected a professional relationship with Epic, but not much more at first," says Ryan. "The reality, however, was far better. We were encouraged and supported all the way by Epic. Nothing was too much trouble, and UDN seems to almost harbour a collegiate relationship. Truly remarkable and very helpful. It was nice to discover that, despite us being a minnow compared with other licensees, we were still accorded first-rate and friendly service."

"The level of support and information that is available from UDN is incredible – with access to guys at Epic who know the engine inside out," says McMillan. "I'm so glad we're with Epic, and I really don't think we would be in the position we are right now had we not made this choice."

Now that Muvizu 3D is available to the public, DA Group is working with its growing user community to create the most ingenious projects for all to enjoy. The studio is launching a competition that will award a high-end hardware prize to the best video created with Muvizu 3D, and the excitement will only grow as more creative types try out the application.

Above: Muvizu 3D in playback mode

UPCOMING EPIC ATTENDED EVENTS:

KGC
Seoul, Korea
October 7th to 9th, 2009

Dubai World Game Expo
Dubai, United Arab Emirates
October 27th to 29th, 2009

DICE Summit
Las Vegas, NV
February 17th to 19th, 2010

GDC 2010
San Francisco, CA
March 9th to 13th, 2010

Please email: mrein@epicgames.com for appointments.

To discuss anything raised in this column or general licensing opportunities for Epic Games' *Unreal* engine, contact: **mrein@epicgames.com**

FOR RECRUITMENT OPPORTUNITIES PLEASE VISIT:
www.epicgames.com/epic_jobs.html

Mark Rein is vice president of Epic Games based in Raleigh, North Carolina. Since 1992 Mark has worked on Epic's licensing and publishing deals, business development, public relations, academic relations, marketing and business operations.
www.epicgames.com

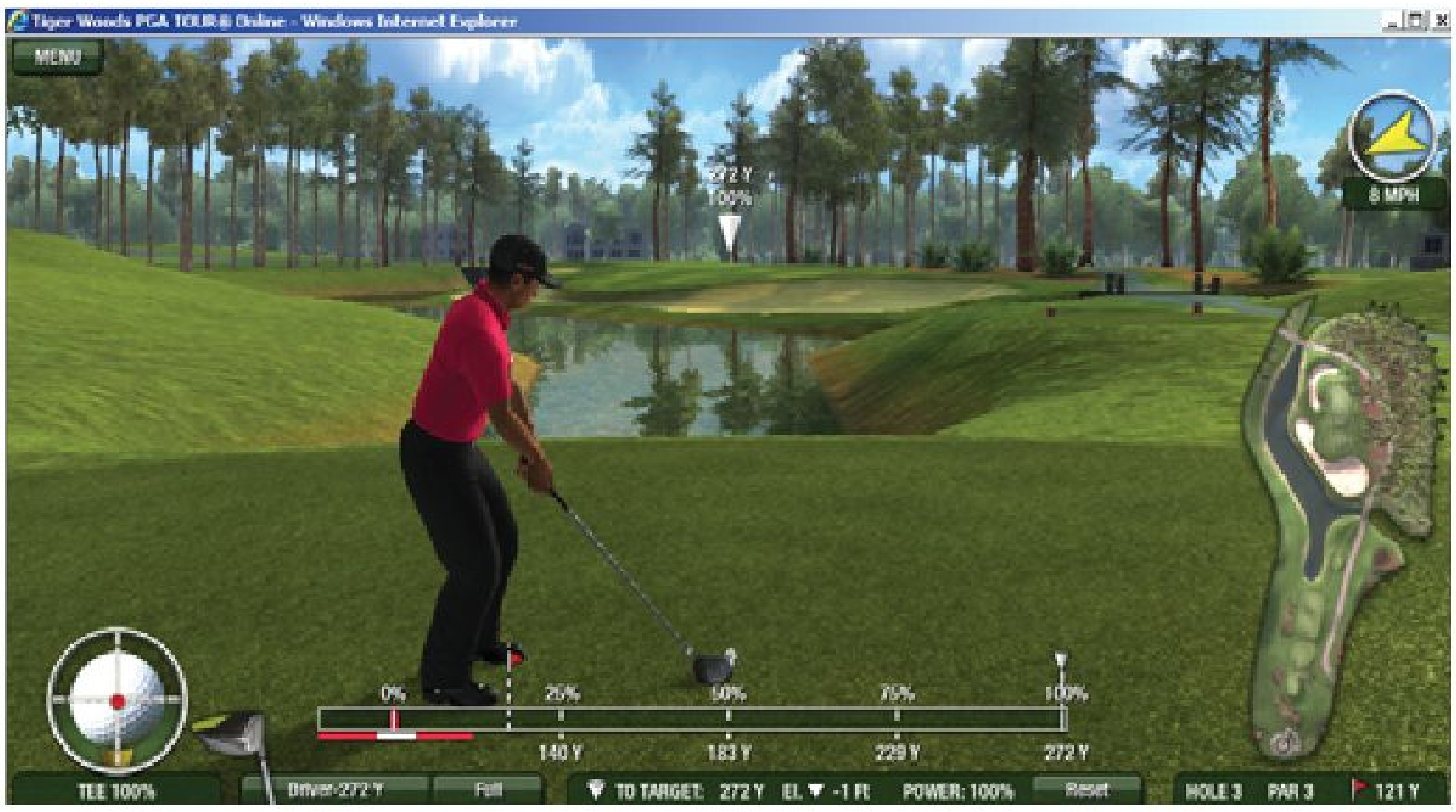
UNITYFOCUS

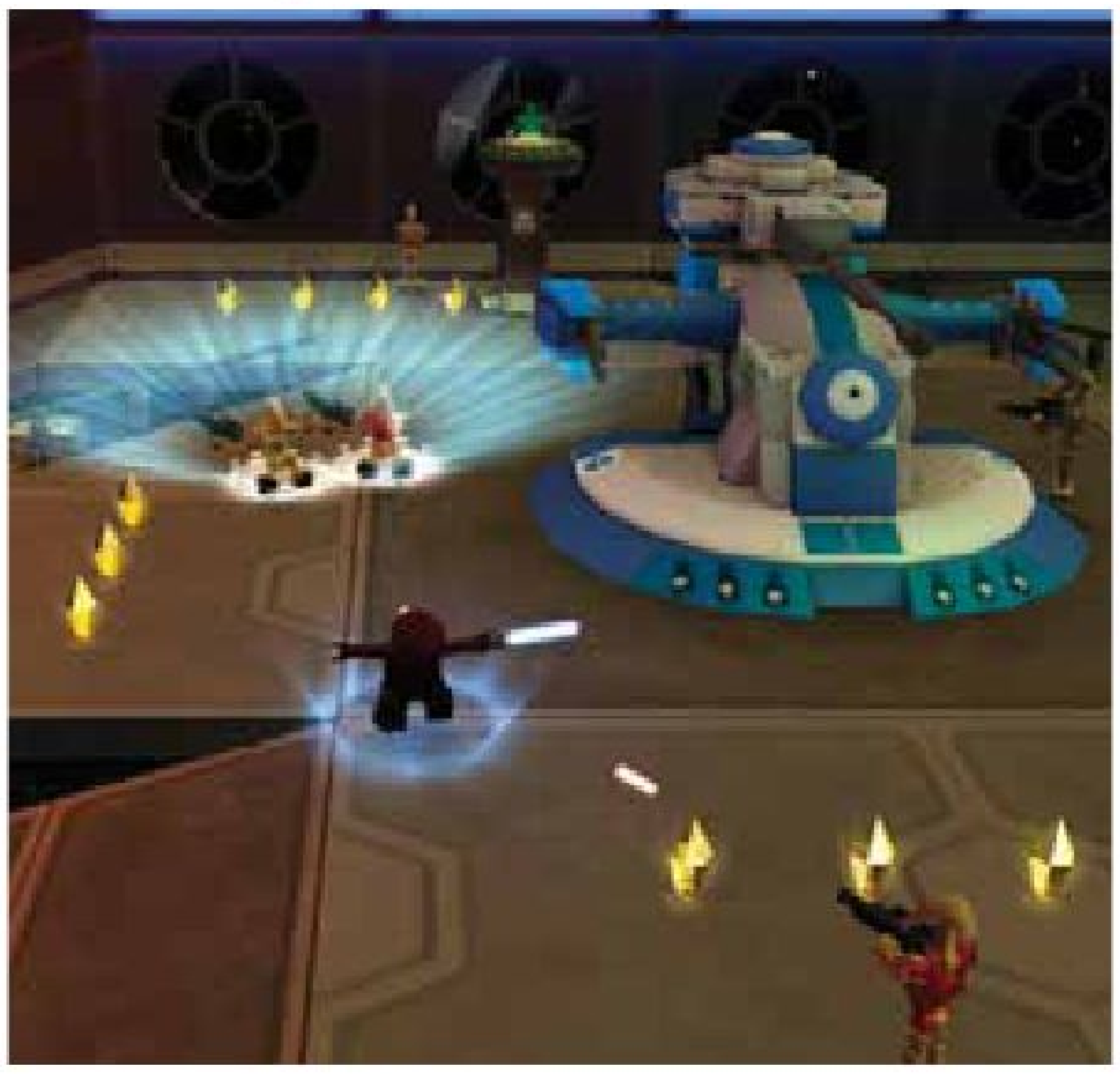
PRICE: $200 for Unity Indie licence
$1500 for Unity Pro licence

WEB: www.unity3d.com

Inside the Unity Web Player

In the first of a regular series of articles, Unity's **Thomas Grové** walks us through what's new in the Unity community…





Unity has often been touted as the most powerful game engine this side of a million dollars. And while it's the leader in middleware for the iPhone and a superb development platform for stand alone PC and Mac games and for consoles like Nintendo's Wii, it has been receiving a lot of attention for its web player. The plug-in has a smaller download size than Flash and, at the time of writing, has already been installed on more than 15 million computers.

> ***The Unity web plug-in is smaller than Flash and is installed on more than 15 million computers.***

A major attraction to using Unity is the ability to author console-quality 2D and 3D games for the Web. Unity's attractive price point was a major factor in seeing early adoption by indie developers, who have been prolific, but more recently Unity has seen an increase in adoption for use with major brands by major development studios.

SPOTLIGHT: TIGER WOODS PGA TOUR ONLINE

Release Date: TBD, currently in beta
Developer: EA Tiburon
tigerwoodsonline.ea.com

In a recent post on the *Tiger Woods PGA Tour Online* blog, live producer Greg Rinaldi said that Unity allowed them to "create a version of *Tiger* for the web that will have the same level of quality as the console versions, while also providing us with the ability to stream the game to you instead of having to install it from a disc or download a huge file. It takes under a minute to get into the game on any computer.

"I can assure you that in spite of the fact that *Tiger Online* is streamed, the technology we are using allows us to deliver some very high-quality visuals. We have fully-realised 3D courses and characters with visuals that rival console games. You're not going to be playing on pictures of golf courses, your character will actually be on the course and you'll be able to see every hill, tree and structure in the environment. This is a true *Tiger Woods PGA Tour* experience."

SPOTLIGHT: LEGO STAR WARS: QUEST FOR R2-D2

Release Date: May 2009, ongoing
Developer: Three Melons
starwars.lego.com

LEGO Star Wars: Quest for R2-D2 developer Three Melons is no stranger to Unity. The company has been using it since 2007 to drive a number of projects. They turned to Unity once again to meet the needs of LEGO: "The LEGO Group never compromises when it comes to the quality of what is offered to our consumers worldwide," said Sten Lysdahl Sorensen, internet content manager at LEGO.

"Unity allows for a unique visual 3D experience that portrays our models and mini-figures in a way that gives kids a premium free online game. We firmly believe that the Unity engine and the skilled work by Three Melons is taking advergaming to a new level and thereby supporting our products in the best possible way."

Q&A DIEGO RUIZ, LEAD ENGINEER AT THREE MELONS

What influences your decision as to which technology to use for a given project?

First of all, we evaluate which is the appropriate technology for making the game that we have in mind. Almost always, this technology is Unity. With Unity we can make both 3D games and even 2D games, powered with 3D effects and some cool camera movements.

What are the relative merits or strengths of Unity compared to Flash, your internal tools, or in general?

We appreciate a lot the productivity that Unity offers to us, how quickly it allows us to move from the idea to the working prototype. You code it and just press play to try it, no more wasted time compiling C++ code. Another key feature is the web deployment, with an amazing compression rate, that fits perfectly into Three Melons' distribution strategy. Some more important features for us are: the excellent editor (with PhysX integrated), the possibility of using C# as a programming language, and the possibility to add new features to the editor via editor scripts.

How else are you using Unity?

Currently we have many iPhone projects in progress. It's amazing for us to use the same technology for desktops and for iPhone and iPod Touch with almost all the key features present. Unity is an excellent tool and we know that Unity Technologies is working hard to make it even better. Some time ago, Three Melons had more Flash developers than Unity developers, now we have exactly the same number of programmers in each team. With many Unity projects that are about to start we are really excited about the future of this tool.

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The Eiconic team works well together, even when apart

Remote control

In this era of super-fast broadband and remote SCM tools, is it now feasible to have a fully distributed development team? Eiconic's **Graeme Monk** offers his advice on how to go remote…

Every company that we have worked with over the past years has, at some point, requested that some of the team have the option to work full or part-time from home. Since we first discussed the founding of Eiconic Games our aim was to allow the whole project team to work not only from home, but other diverse locations, too.

When we first discussed adopting this method we were told that we were mad, that it would never work and the company would likely fold. It's now almost three years later and we have not only survived, but are thriving with our business and development model. Eiconic remains a small development team using quality, experienced and motivated contractors and outsourcers when required, for which distributed development works well. This approach provides flexibility and ties in with what leading independent developers are now promoting, such as the Play Together initiative recently announced by TIGA and NESTA.

Distributed development is no longer just the desire of those working from home, but smaller, more specialised development teams and those working remotely within other studios, too.

Here are some guidelines that we have used in order to get the best out of distributed development.

TEAM AND PROJECT MANAGEMENT

The role of the project's management is to be the mentor, peacekeeper and visionary of the project. Team leaders should be flexible and understanding, but also have the drive to see the team through the bad times as well as the good.

> ***"Our aim was to work not only from home, but other locations, too. We were told we were mad, that it would never work and the company would fold."***

- **Strong team leaders:** The producer, lead artist and lead coder need to promote open communication within the team and work with them, instead of just directing them. Consider having team leaders for game features rather than per discipline.
- **Remove politics and cliques:** The removal of barriers, hindrances and other needless bureaucracy is vital to ensure a driven team meets and exceeds its goals. Cliques can develop when small groups work closely together, and can sometimes be difficult to spot and remove. Try to keep management structure as flat as possible.
- **Small and modular team sizes:** The smaller the team, the less management is required, thus allowing individuals a greater understanding of their role within the project. A small team will focus on one or more games features and will work as its own unit, or be fluid and made up of transient members between milestones. It increases overall production and improves the chances of getting work done right the first time round.
- **Complementary skills:** A team is cross-functional and its members have skills and experiences to complement each other. This creates overlap if someone's away, and allows team members to discuss issues openly. If a member needs time off at short notice, their knowledge is held elsewhere in the team.

Score 8625
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50
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Eiconic's Squeeballs Party game is a unique collection of motion games for Xbox 360, Sony Playstation 3 and Nintendo Wii

- **Flexible project management:** Eiconic uses a modified version of Scrum as its development methodology and has adapted it to fit in with distributed development. This allows the team to be flexible in what's developed while keeping an eye on the final product. It also avoids time being wasted on features or irrelevant tasks.
- **Online project management system:** An online, easy-to-understand project management system is essential to ensure everyone knows what's needed to be done for a milestone and what features are due for development. Give the team the ability to see where its work or feature is in association to others. Eiconic uses Hansoft for its project management as it allows easy access, has a good notification system and can also handle its Q&A requirements.
- **Recruitment:** Careful consideration should be given to new team members who are recruited into the project. It can be difficult to ensure they fit within the ethos of the team, but clear communication and openness will help.

COMMUNICATION

Studio communication between the team is extremely important, and it's a lack of this that often results in a dysfunctional team. When working within a distributed environment communication is vital – it is the lifeline of the team and the project.

- **Daily development and production meetings:** Regular online meetings allow everyone to know what each person or team is currently doing. Scrum requires a daily meeting where everyone notes what they did the previous day, what they intend to do today and what issues they are facing. This is a clear method of ensuring that everyone is aware of the features in progress.
- **Face-to-face meetings:** Distributed working doesn't mean that the team should avoid getting together on a regular basis. At the very least your core team should be able to meet regularly. These meetings should focus on the current game build, and reference other games and media that would influence the design, production and features of the game. They also alleviate social breakdowns within the team due to working remotely.
- **VoIP and internet chat/messaging:** A distributed team needs to be in constant contact, you can't wander across the studio and ask someone's opinion on something. Be in contact via GoogleTalk, Skype or some other method.
- **Online collaboration:** There is a wealth of web programs that allow team members to work together, from online office software such as Google Docs, to web conferencing applications that allow document sharing, collaboration and whiteboards.

TECHNOLOGY

In today's environment, technology makes it easier to work remotely. Businesses need to harness that technology and make it work to their advantage.

> ***"Distributed development is in its infancy within the games industry. We're still learning and making mistakes, but we believe it's a far more productive, fun and cost efficient way to develop games."***

- **Online tools and efficient pipelines:** The toolset and pipeline work differently than they would normally within a studio. The tools have to be robust, as the engineers will not be available to sit over someone's shoulder while they try and repeat errors, or explain what is required. Eiconic has developed its own pipeline for game development that is purely based around an online central repository. This idea allows all members of the team to regularly update their tools with ease and simplicity, and for new members to be able to download the tools in less than ten minutes.
- **Ensure a location bandwidth:** Each location needs a reasonable range of frequencies capable of downloading or uploading assets, and to update the central repository. Furthermore, the bandwidth of your storehouse needs to be relatively high so it can maintain the large amounts of data that are uploaded and downloaded by all team members.
- **Live data:** All the tools, data and build processes exist online, allowing all members of the team to construct, test and play the project at any time – assuming there are no bugs, that is. It also enables the client the same ability, which is ideal for when feedback is required on a feature or resource before a milestone is delivered.

MOTIVATION

Working remotely or unsupervised requires the team to have the right attitude and make sure it is nurtured throughout the project. A motivated and driven team member will not be easily distracted by games, television, movies or the internet.

- **Motivation through ownership:** Providing team members with the ownership of the project is very powerful. Every project has an end goal and through mentoring and guidance, the team can obtain ownership of that objective. Possession and peer review provides both the individual and the group with the motivation to deliver and exceed upon expectations.
- **Peer review:** A team working remotely can often find it difficult to appreciate the work that others do. Frequently review the work and features developed in line with the overall project goal and comment with honesty and openness. This also helps the team maintain focus on the overall project. What's more, compliments on a job well done go a long way.

Besides the above, there are other areas not covered that are particularly important to setting up a distributed development business. Insurers, solicitors, and platform holders should be aware of how the team is set up, otherwise potential problems lie further down the line.

The above suggestions and ideas are just a brief outline of our experiences with distributed development, especially as the process is still in its infancy and particularly so within the games industry. At Eiconic, we are still learning, making mistakes and trying to avoid pitfalls all the time, but we still believe it is a far more productive, fun and cost-efficient way to develop games.
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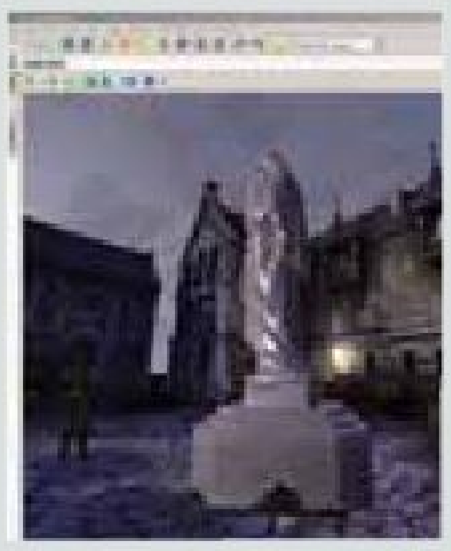

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Studio News

This month: Jagex, Disney, and Crytek…

There seems to be no stopping **Disney**. One minute it's grabbing headlines with a $4bn buy of Marvel, the next it's signing up Bungie founder and *Halo* co-creator Alex Seropian to oversee its studios.

Reporting to Graham Hopper, the head of Disney's increasingly powerful games division, Seropian will be responsible for 'creative development across Disney's in-house video game development teams,' according to the House of Mouse.

Disney has also acquired Seropian's Wideload Games business, the studio he founded after leaving Bungie. Wideload had espoused a focus on outsourcing – other studios and art firms did the 'heavy lifting' on its first game *Stubbs the Zombie*, while Wideload oversaw the design.

Hopper has said that he sees Seropian's role being akin to that of a 'coach' for the Disney Interactive Studios operation, which employs 1,200 staff and includes US-based Avalanche and UK-based Black Rock.

"We're really trying to be a magnet in this industry for talent, as we are in so many other parts of the entertainment world," said Hopper. "Having someone of Alex's caliber join us is a tribute to the great people we have here already."

www.wideload.com

JAGEX
GAMES STUDIO

Runescape developer **Jagex** has promoted its operations manager Rob Smith to the post of chief operating officer.

Smith, who joined Jagex in 2003 as part of the player support team, will now oversee all operational aspects of game development for Jagex's various productions. As well as taking responsibility for managing Jagex's existing games, Smith will also work alongside the studio's executive team developing future titles.

"Rob's appointment as chief operating officer is in recognition of his sustained positive contribution to the Jagex family over the last six years," said Mark Gerhard, Jagex CEO. "I can't think of anything nicer than developing and promoting talent from within and I have every confidence that Rob will continue to excel in his new position."

Jagex, which recently hired Jon Hare to work on its FunOrb casual gaming portal, is most famous for its most succesful title, *Runescape*. The developer is also close to releasing the long-anticipated sci-fi MMO, *Mechscape*.

www.jagex.com

Former freelance composer Ross Tregenza has joined **Crytek Nottingham** as a sound designer. Tregenza, who continues to star in '80s pop band Visage's current line-up, first contributed to Free Radical's output back in 2003, when he created audio for the popular *TimeSplitters* series of games.

In 2007 Tregenza joined Free Radical as a staffer, and proceeded to work on *Haze* and a project for Lucasarts.

However, in the wake of Free Radical's demise, he joined Rebellion and worked on *Rogue Warrior* for Bethesda Softworks and *Alien vs. Predator* for Sega.

As Crytek took over what remained of Free Radical, Tregenza re-joined his former colleagues, assuming his new role as sound designer.

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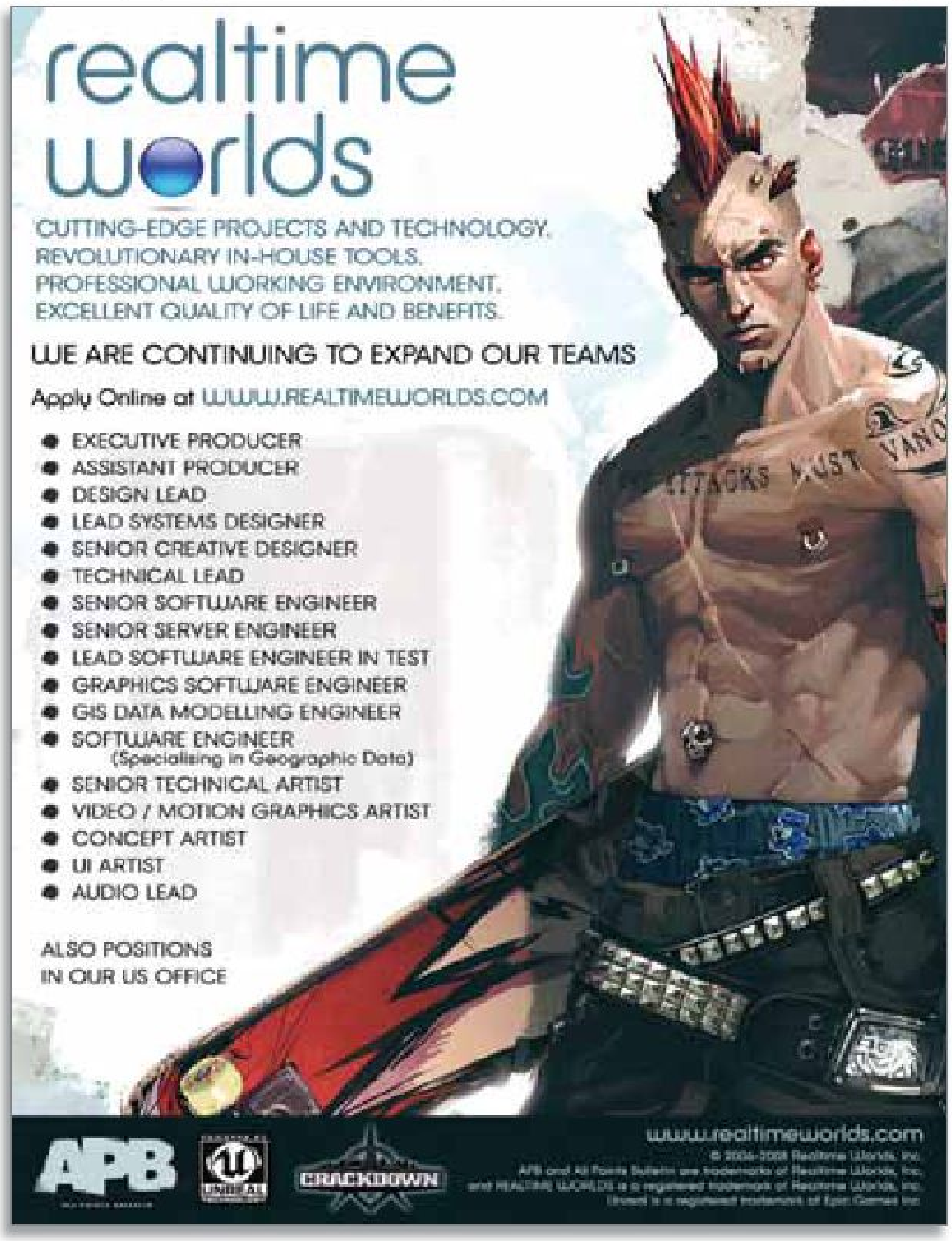

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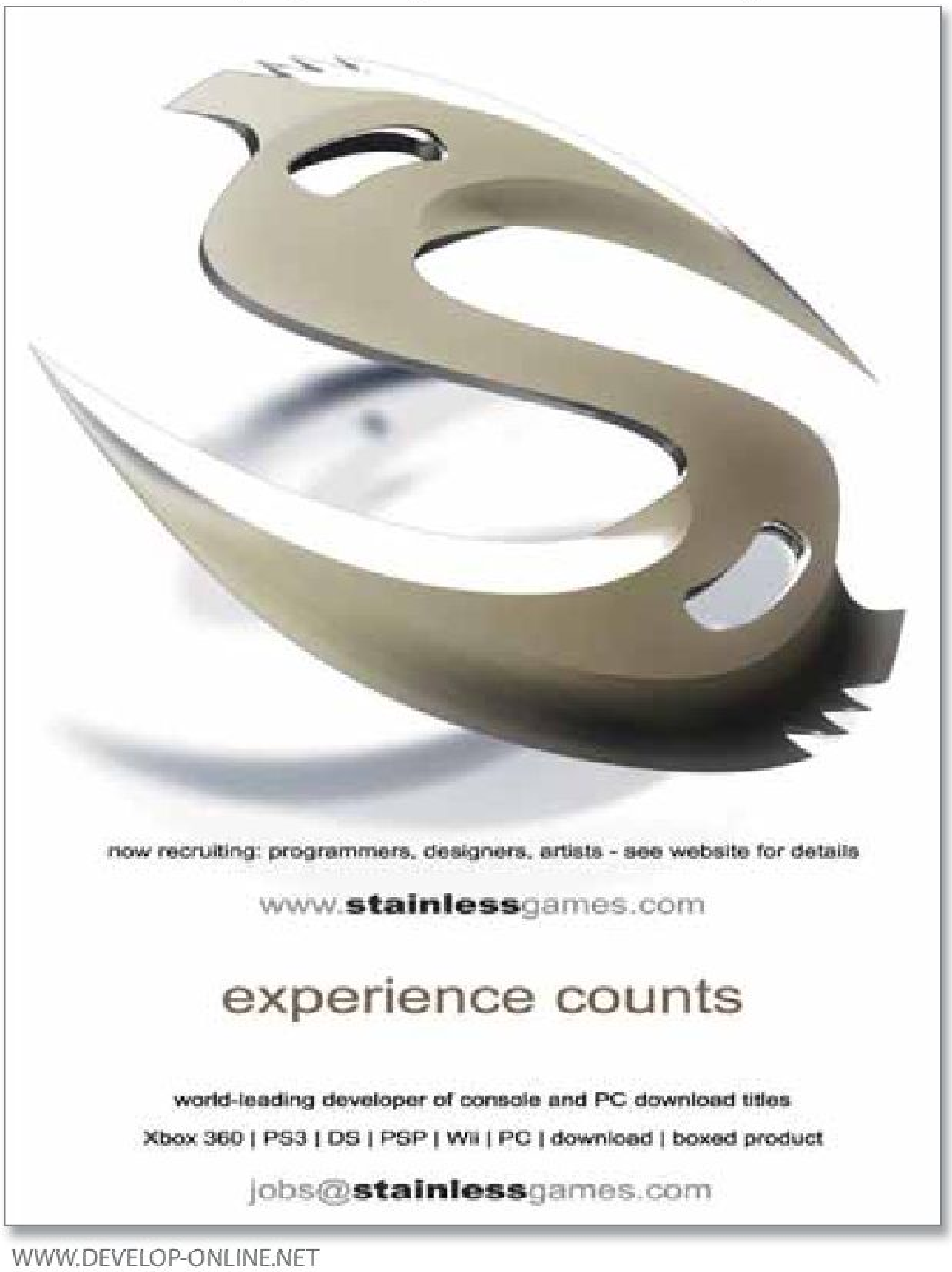

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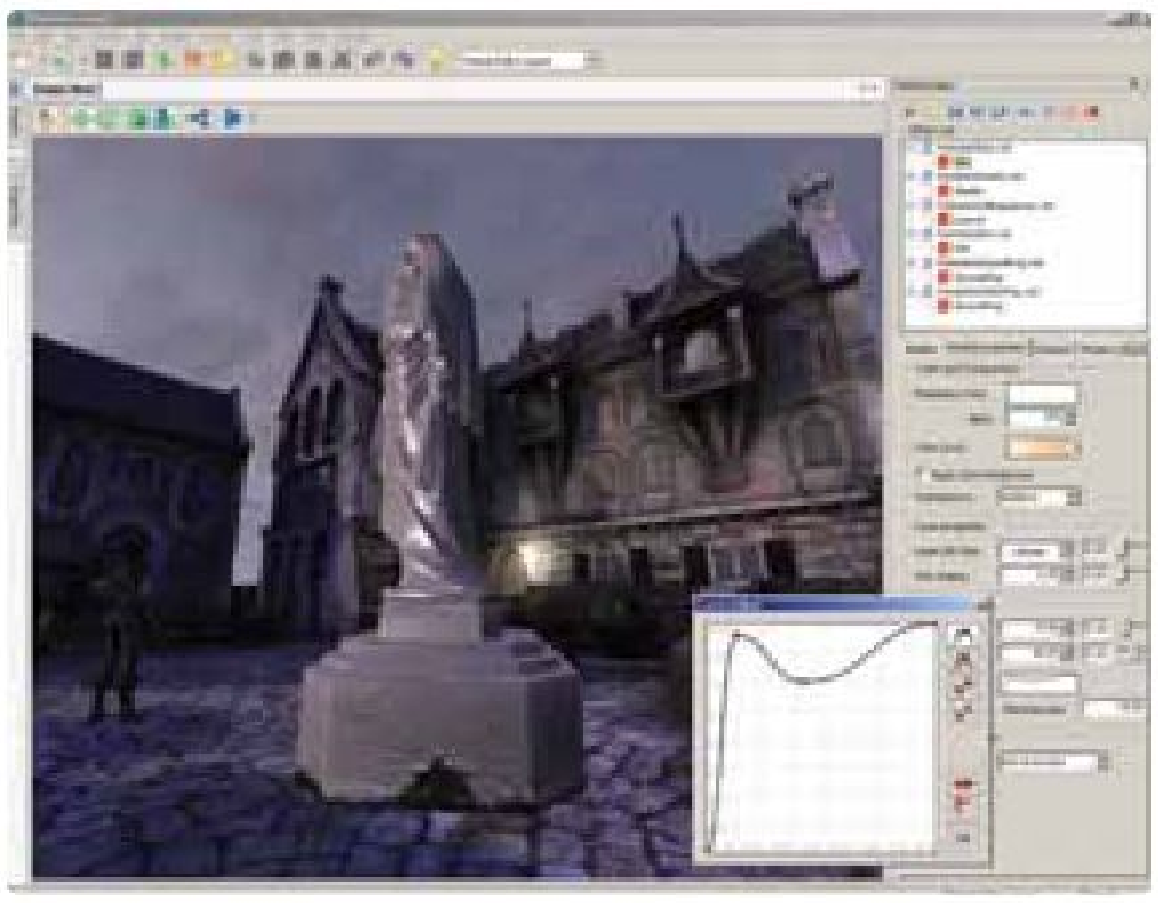
Tools News

Vision Engine updated to v7.6



German middleware firm **Trinigy** has announced significant upgrades for version 7.6 of its Vision Engine.

The latest release is specifically geared towards better workflow and runtime choices. Specific new features included are animation and component editors, deferred rendering, and original integrations with partner technologies, including NaturalMotion's Morpheme, Scaleform GFx 3.0, SpeedTree 5 and Autodesk's Kynapse AI.

"The growth of new technologies and the speed at which those technologies are coming to market have given rise to new forms of games and new methods of distribution," said Dag Frommhold, managing partner at Trinigy.

"Supporting those changes requires middleware that is flexible enough to help a wide range of teams achieve higher quality content faster for multiple platforms and genres. Trinigy's Vision Engine has always been designed to do just that and every feature of this latest release builds on that core principle."

www.trinigy.net

Sony considering free PSP dev kits

Sony has revealed to *Develop* that it could soon offer its PSP software development kits completely free of charge.

The revelation comes just months after the company slashed the price of its PSP SDK by as much as 80 per cent.

In an interview on **develop-online.net**, Sony Europe's Zeno Colaço was asked how the PSP's new Minis scheme could draw developers away from making iPhone games, seeing as Apple is openly offering its iPhone SDKs for free.

"Further down the line, we may investigate a totally free model or supported model," replied Colaço.

However, the SCEE head of developer relations suggested that the free dev kit model is not something that platform holders should rush into, and will presently concentrate on establishing a good portfolio of games.

A current PSP SDK will set developers back $1500, while an iPhone SDK is free to play with but is tagged with a $99 publishing fee.

However, despite these higher costs, Colaço believes that Sony offers developers a better chance for success and stability than its newest rival.

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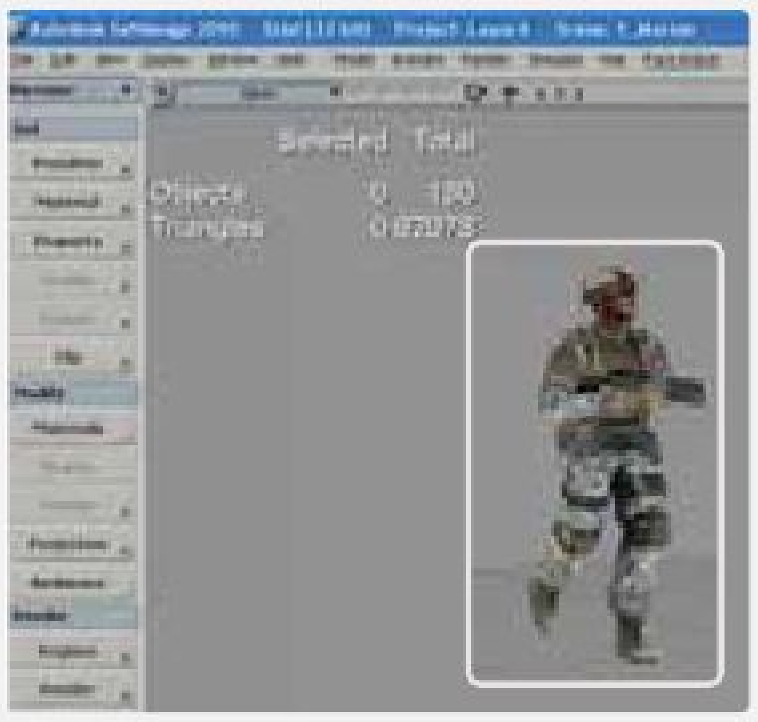

Those worried that XSI might disappear after Softimage's acquisition by Autodesk last year are finding their fears unfounded, as the company continues to update the popular suite.

The latest 2010 edition sees significant speed improvements with regards to data handling, optimised for multi-core and 64-bit CPUs to make large-scale numberic operations much quicker to execute than previously. It also integrates the full version of Face Robot, the once separately-sold facial animation add-on, to quickly animate facial expressions for large numbers of 3D faces.

The ICE workflow has also been enhanced with a new performance bottleneck analyser, plus support for more custom-node creations for C++ programmers; while the Fcurve editor has been sped up when working on large numbers of curves and keys. Other user interface improvements include Scintilla text editors, viewport display of bones in shaded views, and the ability to temporarily hide objects during animation playback.

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Services News

Mixamo and Xaitment team up

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German AI firm **Xaitment** has entered into a partnership with character animation service **Mixamo** in a bid to jointly create 'simpler and faster techniques for applying realistic AI and animations to game characters'.

The two companies will look to ensure that Xaitment's xaitControl tool can seamlessly work with Mixamo's character animations within any game development platform.

"We're really excited to be working with Mixamo," said Markus Schneider, executive vice president for Americas and Asia at Xaitment.

"Our focus has always been on simplifying the application of advanced artificial intelligence for game characters. By offering developers an extremely fast method of creating a vast range of realistic character movements, Mixamo complements our strategy perfectly. I look forward to blending our offerings and revolutionising the way designers and artists create animations for their games."

Nazim Kareemi, CEO and co-founder of Mixamo added: "Our joint partnership presents a very compelling opportunity for game developers to use xaitControl to drive Mixamo's high-quality character animations. Our vision at Mixamo is to simplify 3D character animation for game developers. The relationship with xaitment brings us closer to achieving this goal."

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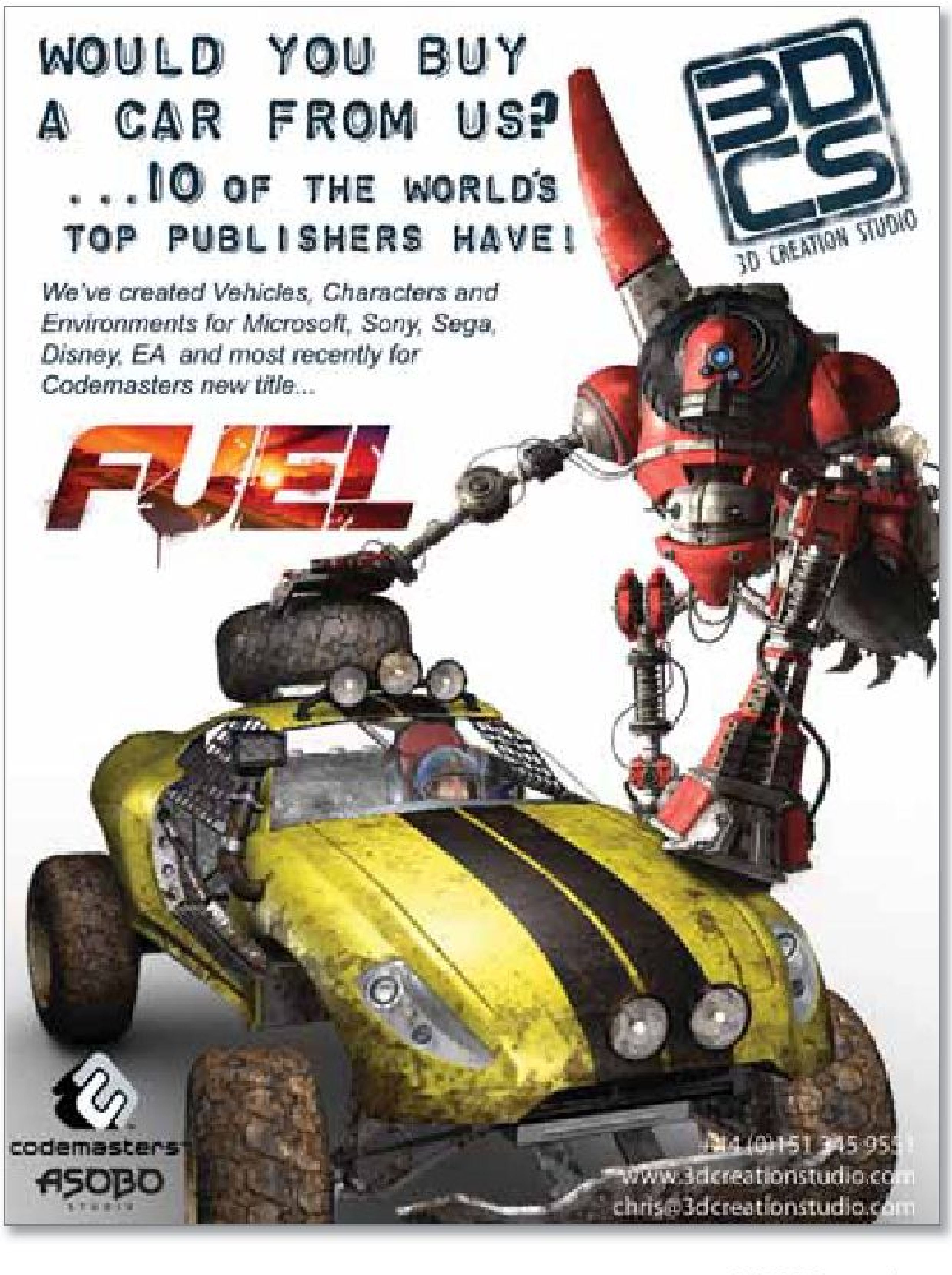

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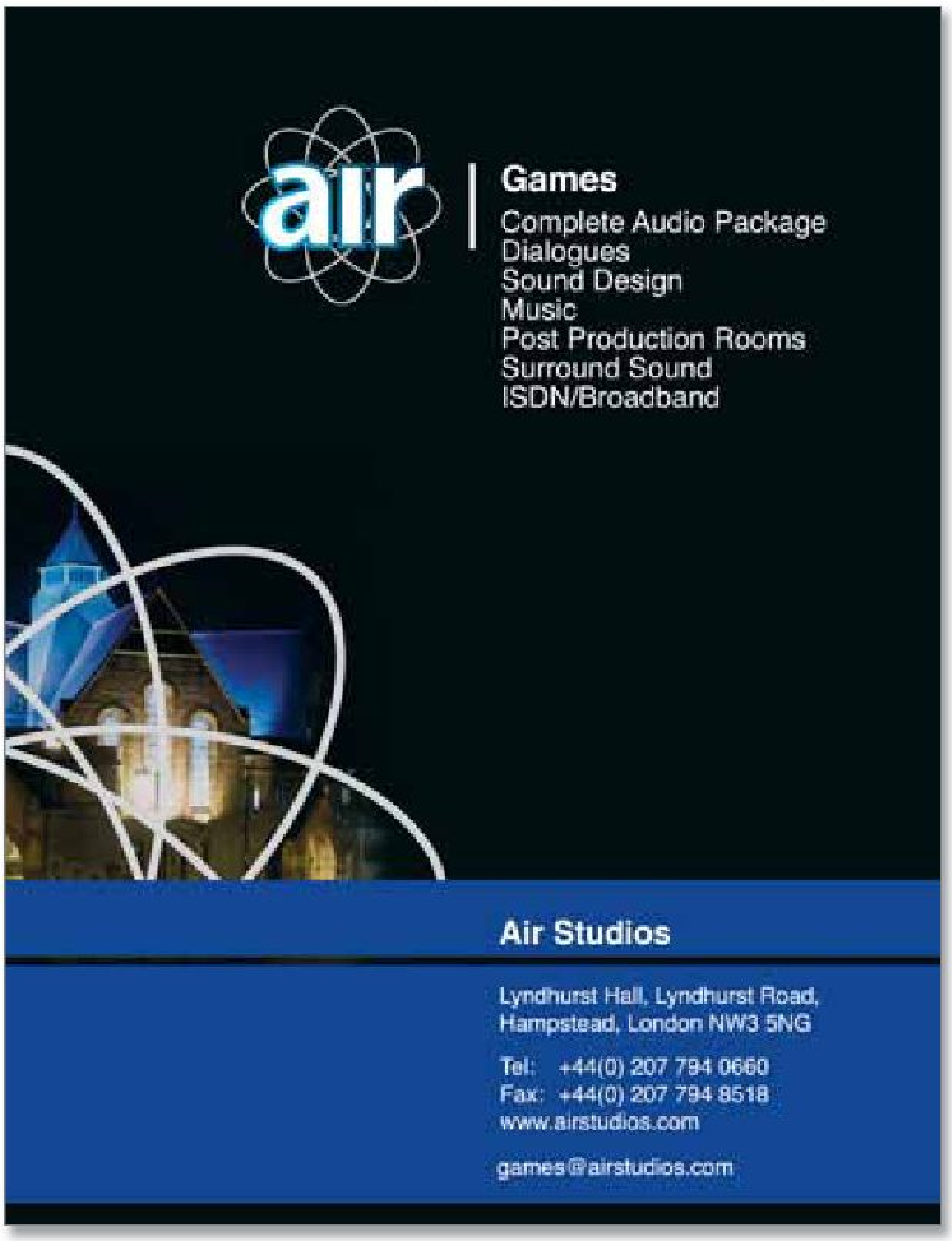

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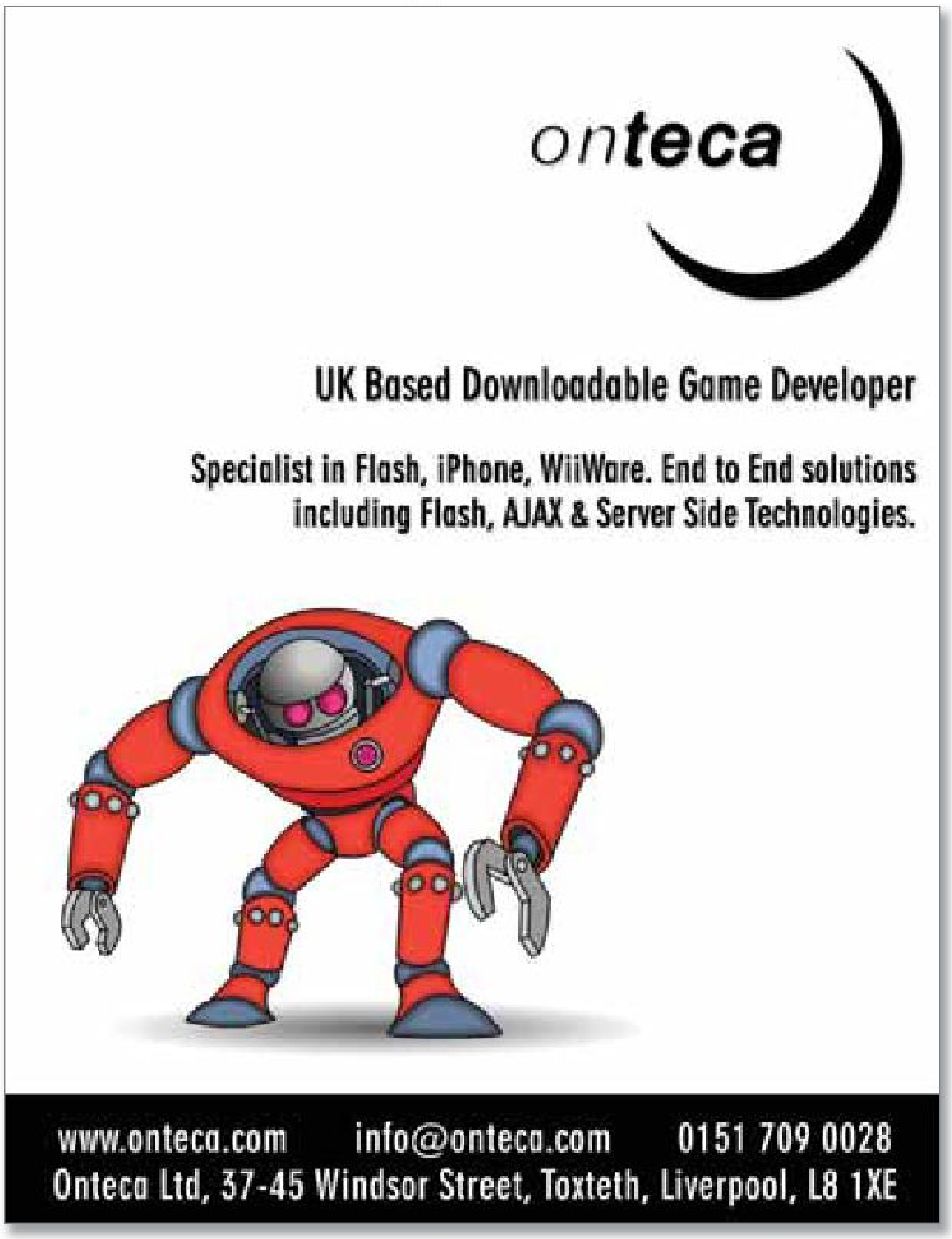

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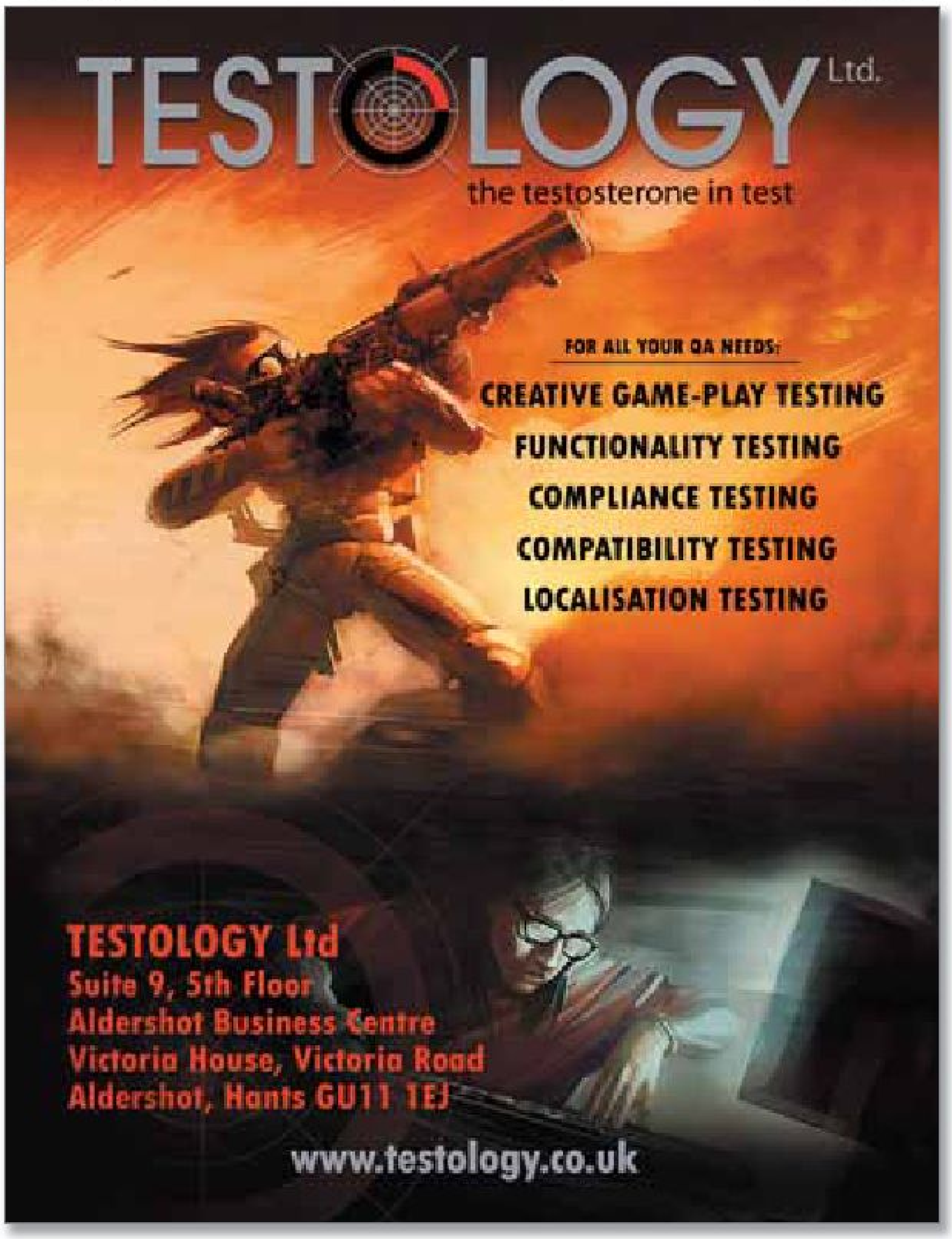
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Training News

Gamer Camp welcomes budding iPhone developers

A number of Midlands-based organisations have partnered for an initiative that invites budding game developers to create titles for Apple's iPhone.

The Gamer Camp event's training process will be lead by Codemasters and Sega Racing Studio veteran Guy Wilday, who was responsible for much of the *Colin McRae Rally* series.

The training event is organised by Birmingham City University's Screen Media Lab in conjunction with Screen West Midlands and Advantage West Midlands.

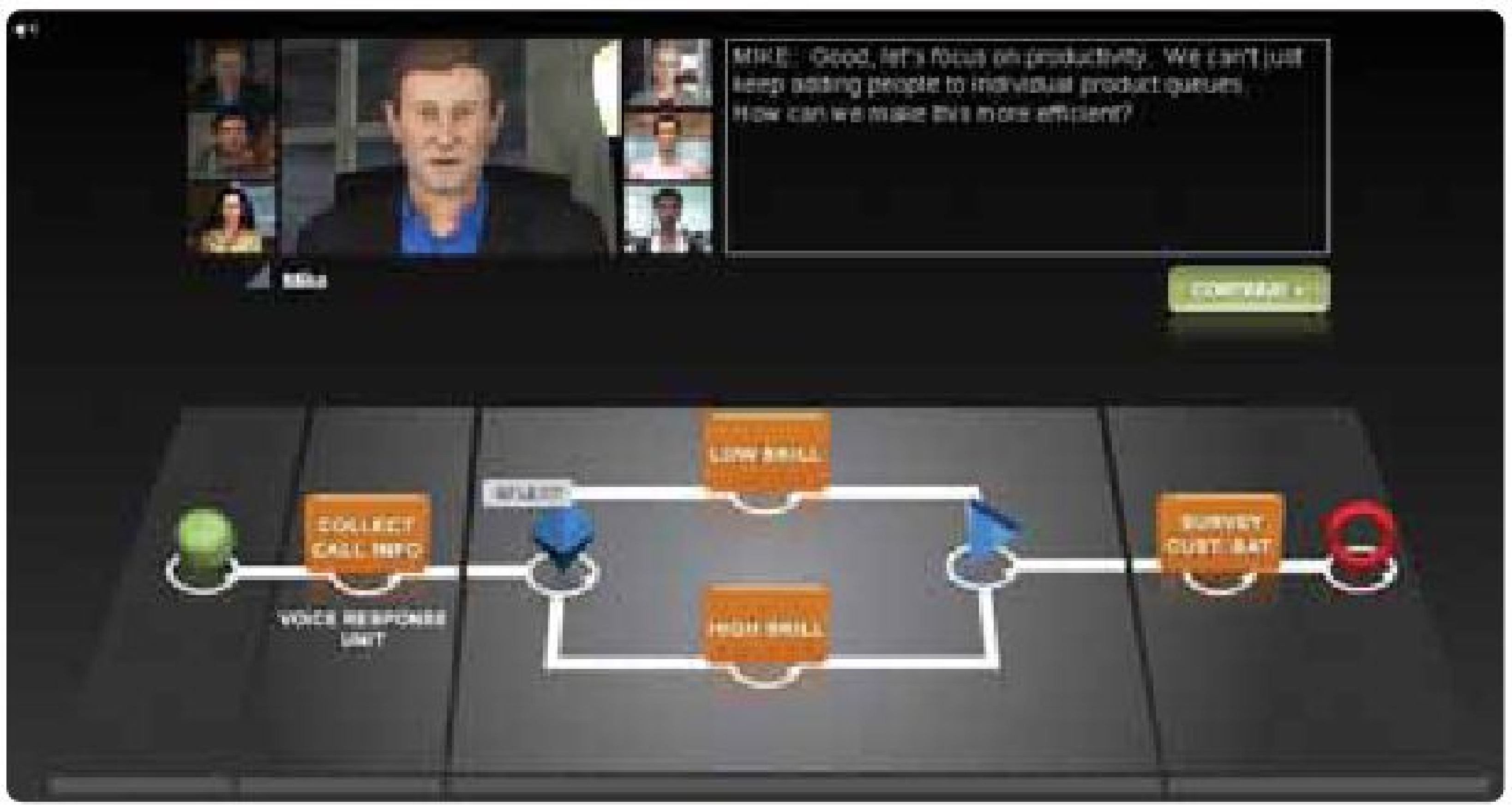
"Successful applicants will be given one week of professional training in either game programming or interface designing, followed by three weeks of mentoring in which they'll work with other participants to produce their very own game for the iPhone," explained Rebecca Ashby, commercial project manager at Birmingham City University's Screen Media Lab.

Course attendees will reap a number of benefits, including game design principles for mobile devices, an introduction to and advanced tuition in the iPhone software development kit, and special skills such as optimisation techniques.

Those eligible for Gamer Camp must hail from the West Midlands area, and have reasonable skills in either programming or game art. Various evening-based elements that are part of the Gamer Camp will be open to those not attending the full programme. The games developed will also see release onto the App Store.

www.bcu.ac.uk

IBM's new game to 'bring life' to stuffy business training



MIKE: Good, let's focus on productivity. We can't just keep adding people to individual product queues. How can we make this more efficient?

In a novel spin on the use of games as an educational tool, IBM has created a game named *INNOV8* to teach students the nuances of the mysterious art of business process management.

In *INNOV8*, mini-games are used in conjunction with a set of 3D interactive tutorials that explain the business value of concepts such as 'service oriented architecture'.

Reportedly based on data from real life scenarios, *INNOV8* lets users tackle business issues relating to scenarios such as an oncoming hurricane, allowing them to discover how their decisions play out and what effect they have on the success or failure of the game.

INNOV8 is already incorporated into the curriculum at the University of Manchester Business School, and Warwick Manufacturing Group at the University of Warwick is one of several other institutions from across the UK which is apparently 'using, or planning to use' the game in its teaching.

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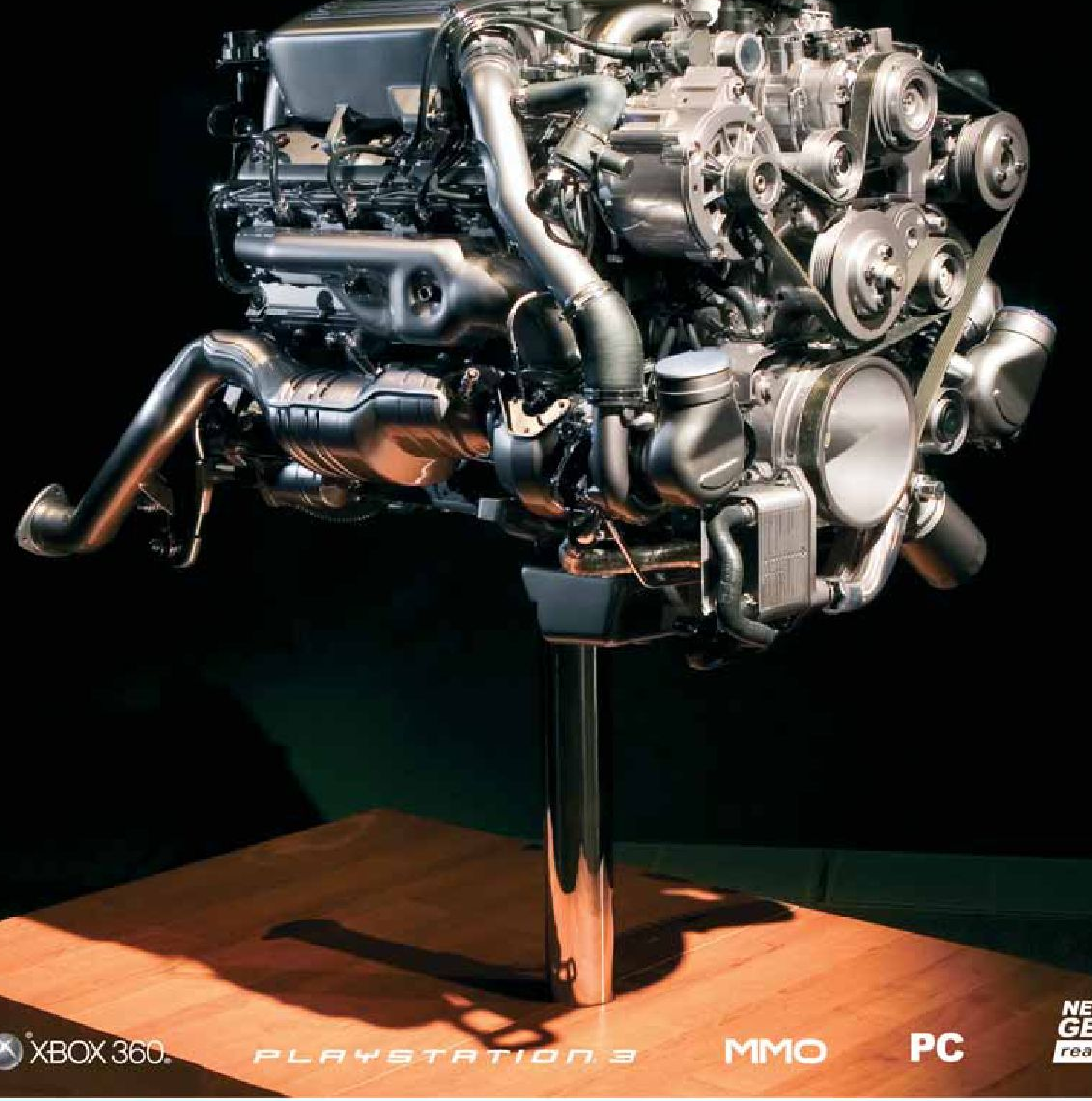

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